DOCUMENT RESUME

ED 409 437 CE 074 361

AUTHOR	Cochinaux, Philippe; de Woot, Philippe
TITLE	Moving towards a Learning Society. A CRE-ERT Forum Report on European Education.
INSTITUTION	European Round Table of Industrialists, Brussels (Belgium).; Association of European Universities, Geneva (Switzerland).
PUB DATE	95
NOTE	164p.
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	Adult Education; Change Strategies; Citizenship Education; Cooperative Planning; Education Work Relationship; *Educational Change; Educational Improvement; *Educational Needs; Educational Objectives; Educational Principles; Educational Trends; Foreign Countries; International Cooperation; *Lifelong Learning; Position Papers; Postsecondary Education; Role of Education; Secondary Education; *Social Change; *Strategic Planning; Trend Analysis; Vocational Education
IDENTIFIERS	*Europe; *Learning Society

ABSTRACT

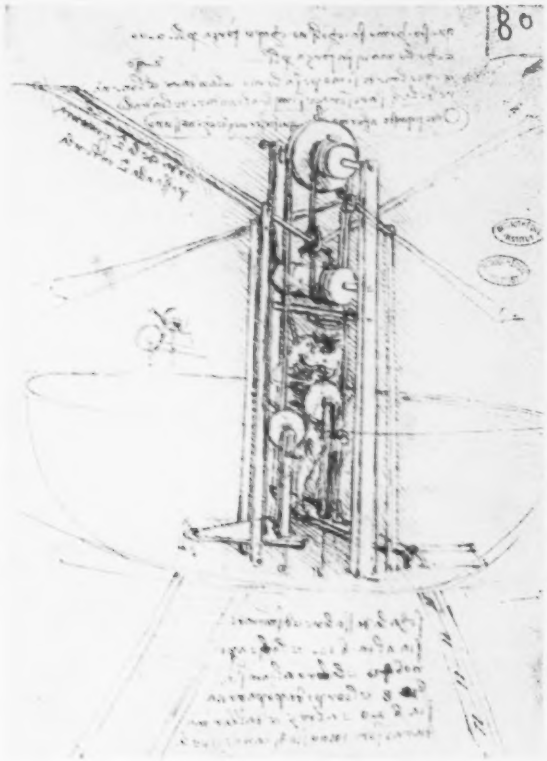
Society is undergoing profound transformations: movement toward a knowledge society, globalization, new patterns of work, unemployment and social exclusion, aging of the population, immigration, transformation of the family, a multimedia revolution, and consumerism. These changes are necessitating better, more balanced education and lifelong learning. More open educational systems and better partnerships between key actors are needed. The quality of European education is being challenged. Although education as such cannot solve all the problems resulting from the many social and economic changes now occurring, it is a necessary condition to adapting society to those changes. The transformation of European education systems will not take place without a shared vision acknowledging human development as the primary purpose of education. Europeans must learn democratic values and realize that they are citizens of Europe and a global planet. Education must be made an open, interconnected chain of learning opportunities available to people from cradle to grave. Europe must make education a political priority. The following strategies for strengthening the educational chain must be adopted: invigorating preschool; upgrading basic school education; modernizing vocational education; opening up tertiary education; and launching a European strategy for adult education. (175 footnotes) (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 409 437

Moving Towards a Learning Society

A CRE-ERT Forum Report on European Education



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

D de Garate

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Philippe Cochinaux
Philippe de Woot

BEST COPY AVAILABLE

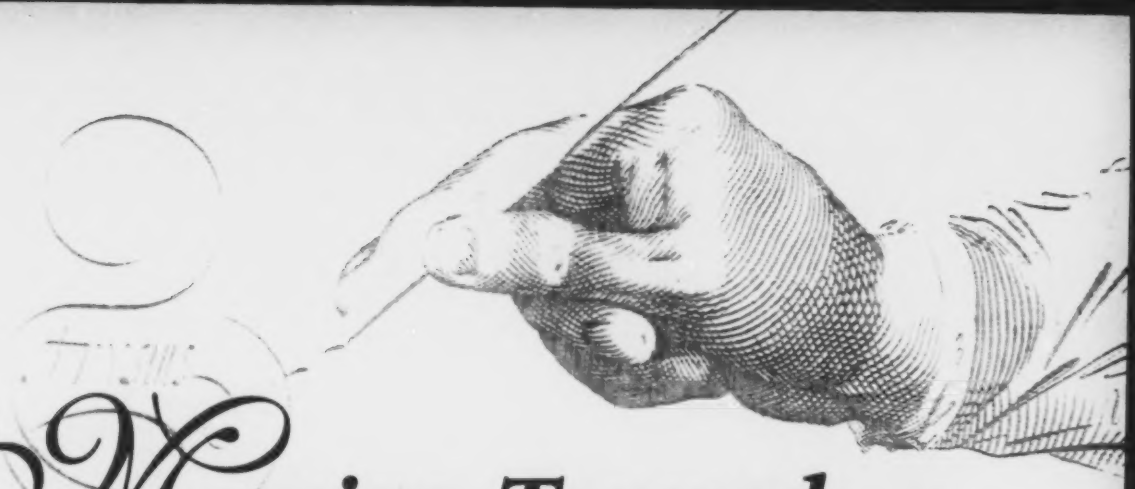
CRE

ERT

CE 074 361

Leonardo da Vinci, Mechanism of Flying Machine - MsB - fol 80 R - Paris, Bibliothèque de l'Institut; Photo Bulloz;
Jan van den Velde, Spieghel der schrijfkonste, Rotterdam, 1605; Universiteitsbibliotheek Amsterdam.

DESIGNED BY IQQ COMMUNICATION - TEL. 32 2/512 11 84



Moving Towards a Learning Society

Philippe Cochinaux
Philippe de Woot
University of Louvain

A CRE-ERT Forum Report on European Education

1995

CRE

ERT

CONTENTS

	Page
INTRODUCTION	5
EXECUTIVE SUMMARY	7
PART I: A NEW EMERGING MODEL OF SOCIETY	18
1. A PROFOUND TRANSFORMATION OF SOCIETY	20
1.1 Towards a knowledge economy : high skills, high tech, high wages	21
1.2 Globalisation	22
1.3 New patterns of work	22
1.4 Growing unemployment and social exclusion	23
1.5 Ageing population and immigrants	25
1.6 Western society in change	26
2. ALL THESE CHANGES PLACE NEW DEMANDS ON EDUCATION SYSTEMS	30
2.1 Need for a better balanced education	30
2.2 Need for a lifelong education	32
2.3 Open systems and partnerships	34
3. THERE IS AN IMPORTANT ADAPTABILITY GAP	35
3.1 Questioning education	35
3.2 What industry sees as inadequate in education	36
3.4 Primary and secondary education as the weak links	37
Conclusions	40
PART II: A VISION FOR EUROPE	43
INTRODUCTION	44
1. TRAINING HUMAN BEINGS	46
1.1 Training people as people first	46
1.2 Training the whole human being	47
2. TRAINING CITIZENS	49
2.1 The compass : basic democratic values	49
2.2 Europe : becoming citizens of various communities	50
2.3 Awareness of a global planet	51
3. CREATING A LEARNING SOCIETY	52
3.1 A learning society	52
3.2 Continual education "from the cradle to the grave"	53
3.3 Partnerships and shared responsibilities	56

4. EDUCATION AS A POLITICAL PRIORITY FOR EUROPE 58
4.1 A strategic area 58
4.2 A european dimension 58
4.3 Strategic investment and consistency 60
PART III: STRENGTHENING THE EDUCATION CHAIN 64
I. INVIGORATING PRE-SCHOOL 65
1.1 The role of the nuclear family 66
1.2 Impact of the social environment 66
1.3 Structured pre-school experience. 68
2. UPGRADING BASIC SCHOOL EDUCATION 72
2.1 Repositioning primary and secondary education 72
2.2 Which curriculum ? covering the three cultures and sports 78
2.3 Which methods should be used? 82
2.4 Controlling quality 91
2.5 Teachers 96
2.6 Specific issues 103
Conclusions 113
3. BALANCING GENERAL AND VOCATIONAL EDUCATION 114
3.1 General education (the final 2-3 years at school) 114
3.2 Vocational education 114
Conclusions 125
4. OPENING UP TERTIARY EDUCATION 126
4.1 Diversity and differentiation 126
4.2 Major challenges 127
4.3 Broadening finalities and leaving the " cocoon " 134
4.4 The european dimension of tertiary education 139
4.5 Balanced co-operation, where each partner plays a specific role 145
4.6 Open distance learning 146
5. LAUNCHING A EUROPEAN STRATEGY FOR ADULT EDUCATION 154
5.1 No systematic approach 154
5.2 Universalisation of adult education 157
5.3 Work -related education 160
5.4 Adult education and Small and Medium Enterprises 163
GENERAL CONCLUSIONS 169

INTRODUCTION

1. Representatives of Europe's industrial leaders (ERT) and of Rectors of European Universities (CRE) have come together to draw up a report on the future of education in Europe.

2. The vision expressed in this report, which is summarised in the pages that follow, derives from answers to questions put to a variety of industrial and commercial organisations and from the experience of those representing the Universities. Inevitably, these views reflect the particular perspective of the report's authors.

   The report itself is intended as a contribution to an already wide-ranging debate. It must therefore be emphasised that its recommendations for change have to be set alongside the changes in educational thinking and practice that are now occurring or being planned by individual institutions, agencies or governments within the European Union.

3. The authors of this report believe that educational systems, when properly adapted to the needs of the future, will bring great benefits (including economic benefits) to both individuals and to the families, societies or wider European community to which they belong.

   With this in mind, the report's recommendations have not been individually costed. The improvements called for are to be seen as an investment in the future. As such, they are to be funded and undertaken, within the resources that can be made available, on appropriate financial and other criteria.

4. The report sounds a note of urgency. The authors make no apology for that. Educational change takes time, sometimes many years, to accomplish successfully. Yet time is short.

   Events affecting the future well-being of Europe are moving fast, all too often to Europe's disadvantage. Not everything can be done immediately or even quickly but, as the report's recommendations make clear, some actions both can and should be taken.

ACKNOWLEDGEMENTS

This report would not have been possible without the active support of Petrofina which has financed both the research and two seminars. The authors express their special gratitude to Mr François Cornélis, Chief Executive Officer of Petrofina SA and Chairman of the European Round Table's Education Policy Group, and to Mr José Rebelo, Director of Human Resources at Petrofina. The authors are grateful to the members of the ERT's Education Policy Group and the experts who attended its two seminars in 1993 and 1994:

Dr A. Barblan, Secretary General, Conference of European Rectors, Geneva
Mr A. de Bérail, Director, Human Resources, Plâtres Lafarge, L'Isle-sur-Sorge
Mr R. Berra, Head of Corporate Executive Human Resources, Hoffmann-La Roche AG, Basel
Prof U. Faust, Abt. Funktions - u. Fortbildung, Hoechst AG, Frankfurt am Main
Prof E. Marcal Grilo, Director, Fundaçao Calouste Gulbenkian, Lisbon
Dr K. Kautto-Koivula, Development Manager, Nokia Telecom., Espoo
Prof J. Kelly, Registar, University College Dublin
Mr G. Kuster, Human Resources Department, Lyonnaise des Eaux, Nanterre
Prof G. de Landsheere, University of Liège
Sir P. Newsam, Director, Institute of Education, London
Mr R. Paniguian, Director, Human Resources, BP Oil Europe, Brussels
Prof. R. Petrella, Head of the Fast Programme, European Commission, Brussels
Dr P. Röttig, Röttig & Rutkowski, Human Resources Consultants, Vienna
Prof H. Seidel, President, University of Hanover
Mr M. Skilbeck, Director, CERI-OECD, Paris
Prof P. Tabatoni, President, European Institute of Education, Paris
Mr J.C. Tedesco, Director, Bureau International de l'Education, Geneva
Dr G. Testa, Isvor-Fiat, Torino
Mr D. Turcq, McKinsey & Company, Brussels
Mr V. Vandenberghe, University of Louvain
Prof G. Verhaegen, President, UNICA, Brussels
Mr B. Waucquez, Société Générale de Belgique, Brussels

and for the support given by the ERT Secretariat:

Mr Keith Richardson, Secretary General
Mrs Dominique de Garady
Miss Caroline Walcot

Prof Philippe de Woot
Mr Philippe Cochinaux o.p.

EXECUTIVE SUMMARY

PART I
A NEW EMERGING MODEL OF SOCIETY

1. A profound transformation of society

Towards a knowledge economy : high-skills, high-tech, high wages

Globalisation and risk of delocalisation

New patterns of work : more learning at work, broader skills, more individual responsibility ...

Unemployment and social exclusion

Ageing population and immigration

Western society in a state of change

* transformation of the family
* a multimedia revolution
* consumerism, freedom, short-termism

2. Changes create new demands on education systems

*There is a need for a **better balanced education***

* higher qualifications and general education
* greater flexibility and adaptability
* personality and initiative
* international skills and foreign languages
* broader competencies.

*There is an increasing need for **Lifelong Learning***

- rapid obsolescence of intellectual capital
- need for more continuous training facilities that provide adequate means to update and upgrade competencies.

We need more open educational systems and better partnerships between key actors.

3. An increasing gap

The quality of European education is challenged by governments, experts, the Commission, OECD and other bodies.

Industrialists denounce the increasing gaps between their expectations and the intellectual and behavioural outputs of education.

In a number of countries primary and secondary education appear to be the weakest links in their educational systems.

4. Education as such cannot solve all the problems

Many forces are involved in the transformation of society, such as economic strategies, social pathologies, changes of values and so on. Education is a necessary condition to adapt our society, but is not in itself sufficient.

PART II

A VISION FOR EUROPE

The necessary transformation of European educational systems will not take place without a shared vision. Such a vision indicates the future we want to build. It ensures that we are pulled by the future instead of being pushed by the past. It strengthens and gives coherence to otherwise isolated reforms.

1. Human development

The primary purpose of education needs to be restored to its proper place : human development.

A strong basic education *is an essential condition of human development*

Forming the "whole" human being *: involves developing mind, behaviour, competencies.*

Knowing what to do, and how to do it, and knowing what sort of person to become, are three inextricably linked concepts.

Learning how to learn *is also essential.*

2. Citizenship

Learning how to practice democratic values

Learning the basic democratic values is important and this aspect ought to be included in education. We must help our young people to provide personal and original answers to the great questions which involve these values.

European citizens

We must learn how to become citizens of various communities : regional, national, European. Europe is in the making and it is important that our young people feel implicated in this emerging community.

Awareness of a global planet

Europe is integrated in a world which is increasingly seen through a global dimension.

European education must provide an awareness of planetary problems, such as environment issues, demography, sustainable development, interdependency and so on.

3. Creating a Learning Society

Continuous education "from the cradle to the grave"

We reject the fallacy that learning ends with childhood. We propose a global approach in which learning is accepted as a continuing activity throughout life [1]:

- learners take responsibility for their own progress;
- assessment confirms progress rather than brands failure;
- capability, personal values, team-working are recognised equally with the pursuit of knowledge

We propose the concept of an "Education Chain"

An open, interconnected system in which each element is important, since the quality of any chain is determined by its weakest link.

Therefore, we suggest that lifelong learning be considered in a systemic way.

The system must be open, provide bridges between the various links of the chain and be "user friendly".

Partnerships and shared responsibilities are a major condition of success

Lifelong learning will be based on the interplay of many actors : the individual, the family, the school, employers, the government.

4. Education as a political priority for Europe

Education has to be considered as a strategic area

We reject, as do many others, any model of European competitiveness based on low wages and low skills. "The only valid alternative for Europe to survive and to remain competitive in world markets lies in a strong capacity for innovation and quality. This can only be achieved with a highly and broadly skilled workforce "[2].

---

1 Ball, C., The Learning Society, in RSA Journal, May 1992, p. 384

2 IRDAC, Quality and Relevance, The Challenge to European Education, 1994.

Education should have a European dimension

Europe is in the making. It will be one of the greatest achievements in history. But Europe will not be complete if we do not improve the compatibility and the interdependence between our various national education systems.

Investment should be consistent with the vision.

In most countries, public spending on education tends to decrease in terms of percentage of GNP. Given the present budgetary situation, it is doubtful whether public funding will increase in the next few years. Therefore we have to improve the management and the organisation of our education systems and find new sources of funds.

PART III

STRENGTHENING THE EDUCATION CHAIN

1. Invigorating pre-school

Pre-school plays a fundamental role within the Education Chain. We recommend that governments provide universal access to pre-school, thereby giving the least-favoured children a real chance to take full advantage of what school can offer and therefore be able to play a worthwhile part in society.

2. Upgrading basic school education

Language and communication

We support every step taken into the direction of improving skills in reading, writing, speaking and listening.

The "three cultures"

European pupils should be able to follow basic general education courses for the first nine/ten years of school. Only at the end of this first stage should more specific lines of study be considered.

During these years of general education, "three cultures" should be inserted in the curriculum :

* mathematics, science and technology
* humanities
* economic and social issues.

No European citizen should be illiterate in any of these fields.

Sports

The playing of team sports develops a sense of teamwork and gives a feel for competition.

European foreign languages

Europe is and will remain multi-lingual. It is therefore of the utmost importance that a European can communicate in at least several of the major languages of Europe. English

appears to be the lingua franca of Europe. As a consequence, it should be taught as early as primary school.

New technologies in the process of learning

Education is an art. Nothing will replace personal relationships in the process of learning. Yet the media revolution is there and we should make the best of it. Computer technology is opening up immense opportunities for information retrieval and use. We are heading towards wider interactive models where teachers will provide their pupils with the means of synthesising and understanding the "limitless" mass of data in their possession.

As a result, education policies should, in the long run, lead towards access to a computer for every pupil. Given the promises of these new technologies, we recommend that the European Union should finance research on expert systems.

Teachers

We should aim at University-level training for all teachers.
We recommend that the governments of European countries that have not yet done so should integrate teachers training, from pre-school to upper secondary level, into their university programmes.

We also recommend the systematic retraining and further training of all teachers.

Enhancing teachers' careers is a necessary condition of any transformation of our educational systems : teachers need to be rewarded for their efforts.

3. Modernising vocational education

Improve school-to-work transition :

* greater partnership between industry and schools
* new forms of apprenticeship

Improve the prestige of vocational education :

* greater readiness on part of Industry to promote people with vocational training background.
* cross-overs established with general education
* new national skills standards agreed

The "triad" system :

In order to upgrade vocational education we recommend that it should be built on three pillars

* continuous general education
* theoretical knowledge in chosen vocational field
* work experience.

4. Opening up Tertiary Education

*Accept **mass education** at this level as an opportunity while maintaining its quality.*

- Redefine the **concept of quality** and excellence for every form of human activity. The concept of quality should not be confounded with the quality required for scientific research. We therefore recommend the launching of a study on the meaning of quality for each type of tertiary education.

- We recommend that governments facing the problem of mass education should enhance the career post of **teaching-assistant**. This profession should allow large-audience lectures to be abandoned in favour of classes of 30-40 students.

- Open **distance learning** institutions should be used more extensively as another means of providing mass education.

*Increase the **European dimension** of higher education*

* greater students and staff mobility
* more European languages
* developing more European networking

*Develop the role of the **Faculties of Sciences of Education***

Universities should be more involved in the Education chain as a normal base for all teachers but also as an active agent of research and development in this key field.

New technologies

We recommend that the Commission sets up the necessary structures for the harmonisation of new technologies so that, on the eve of the third millennium, technology used for education should be interoperable throughout Europe.

*Enhance **Industry-University partnerships**.*

5. Launching a European strategy for Adult Education

We need a policy for adult education :

Up till now, all efforts have been scattered and dispersed. There is no European vision for the sustained development of adult education. Therefore our first recommendation is for the elaboration of a strategy that will fill the gaps and bring about a convergence of various efforts.

***Every European individual** should have access to adult education programmes.*

It is urgent that the governments and the EU institutions create the necessary framework for upgrading and updating adults' competencies and promote :

* modularity of studies;
* availability of adult education from multiple sources through diversified means of distribution;
* possibility of obtaining financial aid for all studies;
* transfer of academic credits throughout Europe;
* multi-faceted cooperation.

All costs to the individual and the employer should be tax deductible.

Greater involvement of universities

In order to serve adult students better, new ways of disseminating education should be studied and introduced, such as :

* extra-mural classes;
* distance learning;
* evening courses and vacation courses;
* new distribution media based on new technologies.

Enhancing cooperation between Industry and Tertiary Education

- Businesses should collaborate with tertiary educational institutions in order to receive recognition for their company courses and to share their experience and their know-how in the field of adult education.

- ERT and Lifelong Learning [3]

Within the ERT these issues have been studied with care. The belief in the merits of industry-university cooperation is widely shared among ERT companies. ERT Members therefore call on their colleagues in industry - whether or not they are members of the ERT - to set an example by taking these positive steps :

* encourage and recognise learning achievements;

* forge partnerships with institutes of higher education where everybody shares responsibility for developing the curricula and the systems of assessment;

* participate in national and European professional initiatives to foster Lifelong Learning.

Lifelong Learning, when approached creatively, will not only enable Europe to be competitive in the 21st century, but it will increase the quality of the educational systems and the quality of life for every individual who uses the opportunities provided.

---

[3] ERT, Lifelong Learning, Developing Europe's Future Capability, June 1992

CONCLUSIONS

- Europe's educational systems need profound change and the need is urgent. That change must be considered as a truly **systemic** process. The key to doing this successfully is not to attempt each element of change in isolation, but to bring the various elements together.

- As Europe's diversity is one of its major assets, each country needs to choose its own approaches to change; but **a shared vision** will encourage such changes to take place with a valuable degree of coherence.

- Successful change will have to involve all the key actors in the educational process. It cannot be imposed from above.

- Given the diversity of Europe's education systems and the number of those involved in those systems, an organic approach to change seems essential, rather than any vast and bureaucratic set of programmes. So it is the organic approach within a shared vision that we recommend.

PART I

A NEW EMERGING MODEL OF SOCIETY

"Civilisation is a race between education and catastrophe"

(H.G. WELLS)

1. A PROFOUND TRANSFORMATION OF SOCIETY

1.1 Towards a knowledge economy : high skills, high tech, high wages

If there is a constant in the evolution of the environment, it is the accelerating pace of technological progress. The actual lifetime of knowledge is becoming shorter and shorter and the content of work in our organisations is constantly upgraded.

All advanced countries predict a significant fall in demand for unskilled labourers and a significant increase in demand for skilled workers and high grade administrators and scientists.

We need to increase our "capacity to churn out skilled workers ... Those workers will give us a vital advantage in the age of human capital, enabling firms to exploit information technology and flexible production ..." [4] As a matter of fact, we need intelligent workers to get the most out of intelligent machines.

This is also true for the services that are taking an ever-growing share of our activities. They not only require high skills but also new types of behaviour in terms of communication and creativity.

The explosive development of IT leads to unforeseen opportunities in the field of Education. On top of that, the "multimedia revolution" is transforming our culture and our behaviours in depth.

Information as a new form of public utility.

Digital information and software can be treated like water and electricity and made available on a low-cost usage basis, breaking the capital barrier for millions of users. (From Chalk to superhighways, Financial Times, 13 May 1994.)

---

[4] A Survey on Education, The Economist, Nov. 21, 1992.

The information society

- The dawning of a multimedia world (sound - text - image) represents a radical change comparable with the first industrial revolution.

- Tomorrow's world is already with us : by the end of the century there will be 10 times as many TV channels and three times the number of subscribers to cable networks. In the USA it is estimated that six million people are already involved in teleworking.

- The USA has already taken the lead : 200 of its biggest companies already use information highways.

- At the heart of the development model for the 21st century, this issue is a crucial aspect in the survival or decline of Europe.

- It can provide an answer to the new needs of European societies : communication networks within companies ; widespread teleworking ; widespread access to scientific and leisure databases ; development of preventive health care and home medicine for the elderly.

EC Delors White Paper "Growth, Competitiveness, Employment", 1993.

1.2 Globalisation

Globalisation means that many jobs that do not add much value are exported to poorer and cheaper countries [5].

We have to provide our workers with the skills to compete at the upper end of the market. The only way for rich countries to stay rich in the long term is to have people who are more productive - which often means that they are better educated.

The world is becoming a global village due to new technologies of information.

1.3 New patterns of work

Increasing competition and fast developing technology have led many organisations (both private and public) to transform themselves in depth : they have increased their capacity for change and for faster adaptation to a turbulent and unpredictable environment. They have to upgrade their products and their services constantly. They have to become (and remain) "leaner and fitter".

---

[5] Training for Jobs, The Economist, March 12, 1994.

For individuals this means greater flexibility and adaptability, a higher knowledge base, more learning at work and alongside work, broader skills (less job-specific), more individual responsibility ... [6]

"Most of these new patterns have their origin in one or more of the following changes :

- a demand for quality and flexibility in the company outputs
- a competitive response through innovation and continuous improvements
- company adaptation through flatter, less rigid structures involving decentralisation and optimal use of human resources" (IRDAC) [7].

1.4 Growing unemployment and social exclusion

1.4.1 The rise of unemployment in Europe is disturbing even if, in the long term, the demographic tendency is moving towards re-establishing a certain quantitative equilibrium. This is dangerous for our democratic institutions.

"In many different areas Europe is now at a disadvantage. There are over 17 million unemployed people in the EU, half of whom have been out of work for more than a year. Reducing current EU unemployment only from 11 to 7 % by 2000 would mean that 10 million jobs will have to be created. To put this daunting task into perspective, net job creation in the EU over the entire 1970-1990 period was 8.8 million (corresponding figures for the USA and Japan being 28.8 and 11.7, both for a smaller labour force)".

IRDAC, 1994.

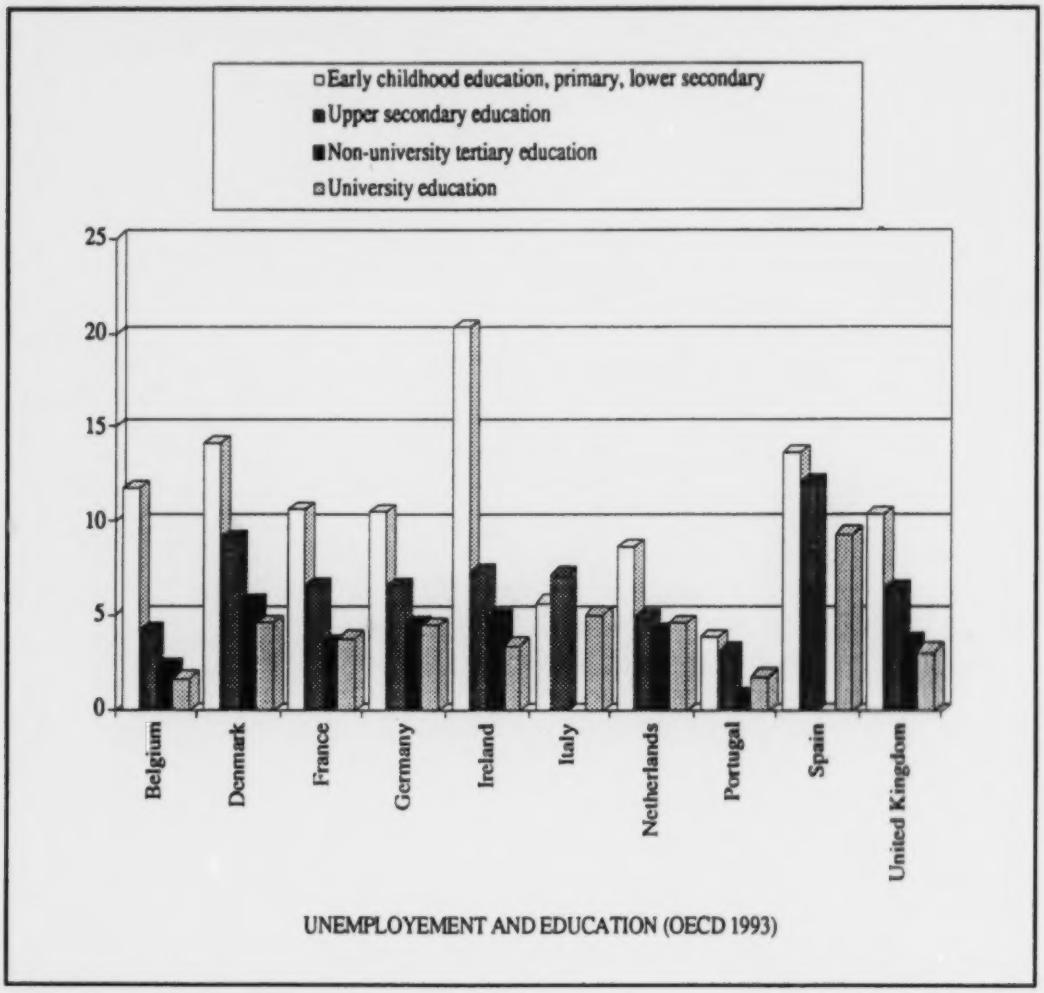
---

6 OTALA L., Lifelong Learning based on Industry-University Cooperation, Helsinki, University of Technology, 1993.

7 IRDAC, 1994, op. cit.

1.4.2 According to many indicators, there is a link between education, employment and professional success.

In many countries, job losses are concentrated among lower skilled workers.



UNEMPLOYEMENT AND EDUCATION (OECD 1993)

Education pays [8]:

* in terms of salary
* in terms of future prospects

The well educated find jobs that provide them with more training, while the uneducated are locked out of opportunities to improve their skills.

---

8 A survey on Education, op. cit.

1.4.3 Unemployment sends out two clear messages :

* the danger of exclusion
* the importance of education.

The danger of exclusion is growing. Whole segments of Europe's population are in danger of being virtually shut out of the job market.

In manufacturing industries, the shift towards more sophisticated technology leads to the employment of fewer, but better educated, workers.

The lack of flexibility of the Labour Market reinforces this trend.

But we should not overstate the ability of increased training to curb long-term unemployment. Many other factors are at play, as we shall see in section 3.

1.5 Ageing population and immigrants

An industry's need for new knowledge was formerly met by the recruitment of recently educated employees. The 20-30 years age group will decrease by 1.7 % per annum in Europe and by 1.3 % in the United States, but will still be increasing in Japan for the next decade. The European work force is becoming older. By the year 2000 it will be five to ten years older than in many of the competing countries (IRDAC, 1991).

In the three decades to come, the young European will become a rare commodity. For each 100 young people in the age range 15 to 19 in 1990 there are only 88 in 1995 and 84 in the year 2000. Demographic projections indicate a stabilisation of population numbers in the first decade of the next century, followed by a continuous decline. Every country in Europe will be affected, even Spain, Greece and Ireland which currently register a certain stability or even rise in numbers of young people. The age range group between 15 and 19 will decrease by about 25 % between 1984 and 1995[9].

"For every 100 economically active persons in the EU there are 124 non-active persons, compared with 98 in the USA and 89 in Japan. In many of the newly developing countries, the ratio between active and non-active people is even higher". (IRDAC, 1994.)

---

9 IRDAC, L'Ecole et l'Industrie, 1990, p. 9.

In many European countries, immigrants (first or second generation) represent a significant part of the population and the work force. This can be considered either as a threat or as an opportunity for a more open society. Integration of these immigrants is becoming an important political and cultural issue. In this report, we argue that the quality of the education they will receive in Europe should be considered as a priority.

1.6 Western society in change[10]

1.6.1 Primary socialisation

Transformation of the family.

Traditionally the perception of the family as the primary agent responsible for the socialisation and education of children, designated practically the whole of civil society, because the family system was nearly coextensive with society itself. The transmission of values, both civil and religious, and proper to a well determined social class, was the principal function executed by the family. This last factor contributed to the integration of new generations into society as a whole, as well as their membership in social groups.

Yet, during these last three decades, a general disturbance has occurred at the core of the family to an extent which has never been observed before. It is to be noted that most European countries, particularly the industrialised nations, have experienced a high proportion of the observed changes. These profound upheavals have provoked the need to redefine the concept of the family. The image of the nuclear family, composed primarily of a father and mother who have produced children together and live under the same roof, still the dominant trend, no longer constitutes our primary family model. Nevertheless let us emphasise that in most EU countries the dominant model remains that of married parents living with their children. We are not witnessing the death of the family as such, we are only noting the demise of an old-fashioned family unit.

Because of this transformation, a new family model is about to emerge, but still escapes definition. One can already say that the family is no longer considered the primary institution of modern society but a place of private and particular interests. From this, it

---

10 This section is mainly based on the following researches:
- Fourez G., Eduquer: Ecoles, Ethiques, Sociétés, Brussels, De Boeck, 1990, pp.104-106
-Pourtois J.P. et Desmet H., L'éducation familiale et scolaire en mutation, Facultés des Sciences Psychopédagogiques, University of Mons, 1992, p. 29
- Les transformations du contexte socio-culturel et normatif de l'école, Brussels, Centre d'Etudes Sociologiques des Facultés Universitaires St-Louis, 1991, pp. 8-22

results that the individual adopts a passive, consumer attitude instead of being active and this occurs at the social, emotional and professional levels.

The infant king

According to numerous sociological studies, the voluntary limitation of birth has provoked and encouraged another concept of childhood and education. While the number of children is nowadays declining, those that are born are generally more wanted and expected than before. As a consequence, the child does not irrupt unexpectedly into the life of the parents but is most of the time "planned" in accordance with the economic climate and the professional responsibilities of the parents. The child's relationship with the couple takes on a new connotation: the emotional and symbolic function which he inevitably plays will outweigh all other functions. In other words, the child gives meaning through the emotional gratification which he provides to the couple. The imaginary room which he occupies helps to determine the fundamental principle of the family.

We note a general tendency for the promotion of the infant king within the family. The child becomes the principal decider in the choice of television programmes and he plays an equally important role in imposing 40% of purchases of the household.

The ideal of youth

Western society today thrives on the substitution of the ideal of youth in place of the ideal of the mature. Culturally speaking, young people find themselves at the centre of a society which admires the values of youth. In former times, young people who wanted to be taken seriously and thus be socially accepted would assume all the exterior airs of maturity and responsibility. Today, however, it is adults who desire to resemble young people and above all to remain young. Advertisements contain the surest proof of this trend. The culture of youth is fast becoming the dominant culture of the West.

Inverse socialisation

Faced with this profound transformation of the family, we speak more and more of "inverse socialisation". In this situation the child acquires knowledge outside the family and teaches his parents. (This happens, for instance, through the use of computers, or through the content of certain television programmes.) However this is done, socialisation within the family becomes a two-way dialogue, no longer a one-way transfer from adult to child.

Conclusions

The promotion of the infant king, in combination with the notion of self-realisation of the parents, and also the evolution of parent-child relations in a more liberal and permissive

sense leads the family to delegate on to the school some functions of primary socialisation.

1.6.2 Secondary socialisation

At school

Historically, the school has been the place of secondary socialisation par excellence. Even today it introduces pupils to the social and institutional dimensions for life in society. The child is given an institutionally established role and enters into the constraint of organised relations in connection with the acquisition of practical and behavioural knowledge. He must face the authority of his teacher and respond to contractual obligations imposed by these relationships (to complete homework to get marks, to respect discipline in order to avoid punishment, etc.) The school is therefore the primary place where individual rights confront collective constraints, implying reciprocal obligations.

Within peer groups

The school institution is no longer the only source of instilling social responsibility. It is now in direct competition with children's peer groups. More than anywhere else it is in these peer groups that children acquire all the characteristics associated with youth culture. A double standard applies here. On the one hand, youth culture finds its support in the media and the leisure industry. On the other hand, the peer group plays an active part in the selection and amplification of messages received from the surrounding media. Some studies indicate that a significant part of socialisation is acquired inside these peer groups. Therefore contacts with another young person or any adults not in a position of authority (for example, bus drivers, members of a sports team, scouts....) may have important, even determining effects, on the personality of the individual.

1.6.3 Towards an exploded socialisation?

The complexity and constant transformation of Western society requires us all to continue socialising throughout our lives. This could be termed "permanent socialisation". Socialisation for the individual never stops. No one would dare today to present the case for socialisation as a process of inculcation and interiorisation of roles, norms and values, namely as a structuring and a conditioning of the individual in the sense of primary integration into society. The theories of mere primary and secondary socialisation do not match reality.

It is therefore preferable to talk of "exploded socialisation", following the image of the "exploded culture" which characterises our society. This socialisation is becoming all the

more exploded because the channels of socialisation are contradictory; either because institutional contexts contradict each other (family - schools - media's - economic world), or because within each institution the proposed models themselves are contradictory.

Thus each individual must play an active part in building his own character. A young person "can tinker with" his own identity by assembling various elements which are sometimes heterogeneous, or even contradictory, acquired through encounters at school or inside peer groups. He creates for himself a patchwork personality. He becomes the actor in a "self-service identity" where everything is on display but rather disordered. He has only to pick and choose according to his own needs and desires which are conveyed by the cultural environment within the social and emotional milieu to which he belongs. Such a structuring is less strong than the one which existed in the past. It allows each person to develop a more original character, but at the same time this introduces a certain instability. Unfortunately, this type of personality is not sufficiently robust to produce the flexibility so much demanded by contemporary economy.

1.6.4 Consumerism and freedom

Our culture is in the process of being fundamentally reorganised. Our social habits, our style of life, but most importantly our beliefs and values are being radically transformed and redefined. The arrival of this cultural revolution has been heralded by the simultaneous appearance of four elements which must clearly symbolise our times, and which best characterise the effects of these changes : the automobile, the television, the vacation, and the birth control pill. Each in its own way evokes the age old dream of liberty [11]. Short-termist, hedonistic consumer culture is displacing the work ethic.

---

11 Racine R., l'Europe au-delà du chômage, Paris, P.U.F., 1992, p. 95.

2. ALL THESE CHANGES PLACE NEW DEMANDS ON EDUCATION SYSTEMS

In a knowledge-based and global economy, the whole demand for education is evolving towards

- training at a higher level with better balance
- new opportunities for real lifelong learning
- education systems that are more open and interconnected.

2.1 Need for a better balanced education [12]

2.1.1 Higher qualification and basic education

From a micro-economic perspective, and as far as they are concerned, ERT companies believe that high qualifications are an absolute necessity for the survival of European enterprises. The lower qualified jobs will be subcontracted or exported. The same trend applies to the service sector, especially to banking and insurance at different levels.

These qualifications should be built on a strong **basic education**. This implies not only the capacity to reason and to think but also a sufficient awareness of the key issues in the fields of politics, economics, social issues, history and culture.

2.1.2 Flexibility and adaptability

Most, if not all, those skills seem either directly or indirectly related to change : change requires intelligence to be understood and drive to be implemented. As Marcus Aurelius, a famous Roman emperor once said: *"man must act like a thinker and think like a man of action"*.

Action implies diagnosis, prognosis and treatment.

To face continuous change, an individual has to become much more flexible and adaptable. In such a world "**learning how to learn**" becomes more important than the content of learning. Without that capacity, an individual will be lost and unable to find or

---

[12] ERT Survey.

keep a job. That will increase our social tensions and contribute to the destruction of our social fabric.

2.1.3 Personality and initiative

Diplomas and degrees are important, but not sufficient. From an industrialist's point of view, it is important to stress that the intellectual achievements and aptitudes of an individual are as important as personality.

There is no simple definition of personality : as well as intellectual aspects, it comprises a wide array of qualities and traits such as individual **character** and behaviour - physical aptitudes, such as natural drive, energy and high resistance to stress, must also be taken into consideration. It is interesting to note that companies in general do not share the sharply divided view that places "individualism" in opposition to "teamwork" or "specialist" against "generalist".

More and more, business firms are looking for **leaders** at all levels.

Leadership is the most qualitative attribute of good management. It is also the most personal and the most difficult one to define. One modest but interesting definition is given in a Shell internal management document : "Leadership is a natural, unforced ability to inspire people. The influence which emanates from a good leader is unspecifiable, but cannot be effective without the following combined qualities being present : natural drive and a fundamental respect for, as well as a genuine interest in people".

In turbulent times, learning organisations need a spirit of enterprise at all levels. That means increasing alertness to change and creativity, self-reliance and self-motivation, initiative and risk taking, ability to perform in ill-defined and fast changing environments.

2.1.4 International communication skills

Fluency in foreign languages is a key requirement. English of course has become compulsory as the *de facto* business "Esperanto". Industry rates highly the ability to learn a local foreign language within a year. If Europe wants to develop its own competitive advantages, its citizens can use their natural linguistic skills as a powerful vantage point.

2.1.5 Competence

Under the general heading of "competence", the ERT survey emphasised some key needs:

* openness and alertness to the complexities of the technical, economic and socio-political environment

* critical assessment : striking the right balance between paradoxes
* anticipation, creativity, innovation, "heretic" mindset
* flexibility, "switchable" personality
* commitment to decide, to get things moving, achievement
* professionalism, excellence, distinctive competitive edge
* empathy, natural drive, strong nerves
* communication (including languages) and teamwork (networking would be preferred as a more open concept).

The extent to which these skills characterise different jobs depends of course upon the hierarchic level and specific responsibilities; the higher the function, the larger the scope and the longer the perspective.

2.2 Need for a Lifelong Education

The acceleration of change described in Section 1 leads us to think of education as a continual process which must be developed "from the cradle to the grave".

We live in a world in permanent transformation, full of turbulence, discontinuities and surprises.

From this perspective, the ability for self-questioning and self-renewal is an important factor in both social and professional survival. The concept of lifelong learning takes on its full meaning because the development of knowledge is at the heart of this acceleration. In a world in which the worker must be a "knowledge worker", the renewing of knowledge must be seen as a priority investment for both individuals and enterprises. Lifelong learning is the only serious perspective from which we can adapt our education systems. It is necessary to abandon the basic hypotheses of the traditional education systems : namely, that one is formed once and for all during the first years of life.

The virtue of such a perspective of lifelong education is that "it could provide a new vision and a better framework for welding together in one integrated effort the various components of the education and training arrangements, which are often separately organised, and thus create much more dynamic and flexible education and training system for the future" [13].

A number of elements confirms why such an overall approach is needed :

---

13 European Commission Task Force-Human Resources, Education, Training & Youth. Brussels

- **The rapid obsolescence of the intellectual capital of individuals** : the erosion of knowledge in many areas can be as high as 15-20 % per annum and 7 % is about the lowest figure.

- **The ageing of Europe's population**: more than 80 % of the workforce that will be active in the year 2000 is already at work. There will be an increasing number of changes in work and occupations, but the competence of this 80 % should still be valid in the year 2000.

- **The slow adaptation of our education systems** : Despite some transformation and progress, a serious lag exists in the adaptation of our education systems. All the evidence indicates that teaching institutions react less quickly to change than do other institutions in the business world. A number of factors go to explain this: the relative absence of pressure to perform, the non-competitive environment, vested interests, lack of motivation, etc. This slow adaptation considerably amplifies the problem of obsolescence, and support a policy of recycling soon after the beginning professional life. As long as the "basic" education will not have adjusted itself to the needs of modern professional life, it will be necessary to accelerate and multiply the possibilities of recycling if we do not want the number of "definitive losers" to increase.

- **The pressure on Business to compete** : High performance businesses define themselves more and more as "learning organisations". In order to respond to the challenges which are encountered in today's world (turbulence, surprises, discontinuity ...), and in order to avoid "self-complacency", they create a challenging climate of apprenticeship which helps to develop their employees' ability to change and progress. To support their competitive strategies they develop a collective capacity for improvement and "permanent" transformation. Therefore they expect individuals to come out from the education system with the ability to understand and learn more (i.e. to take up "best practice"). They also expect their efforts at training to be supported. They recognise that there are domains for which the university is better equipped to retrain their people. This very dynamic orientation of the high performance enterprises creates an important demand for continual education.

2.3 Open systems and partnerships

If lifelong learning is an answer to the new challenges, it has to be organised on a large scale but in a very open and flexible way : with many points of access to the various parts of the education system, enough bridges, transferability of credits, highly diversified programs, good adaptation to the constraints of working life, creative use of the new interactive media, etc. ... Those require a huge transformation of most of Europe's education institutions.

Lifelong learning implies much greater partnership between the world of education and the world of work. Companies, public administrations, schools and universities will have to work closer together to share this enormous burden of constantly updating and upgrading the competence base of our population.

3. THERE IS AN IMPORTANT ADAPTABILITY GAP

3.1 Questioning education

As stated earlier, these education systems have been questioned in the majority of European countries, despite many of the changes and improvements already realised. A great deal of progress has already been accomplished and continues to be achieved but, in this field, the transformations are slow and there is much still to be done.

Perhaps with the exception of Germany and the Scandinavian countries, there is considerable unity in criticism of the education systems 1.

- In 1994 a French Minister of State Education found it necessary to draw the attention to a law reminding the country that one of the primary objectives of Education is to learn how to read and write. This reveals much about the drift of the system.
- Also in 1994, the British Minister of Trade and Industry admitted that the weak point of British competitiveness was Education.
- The same anxieties and the same criteria can be found at different levels in Belgium, Italy, Spain...
- The countries of Northern Europe have to implement a strategy for evolution and adaptation which will allow them to avoid a profound crisis.
- The latest reports by the OECD insist on the necessity to improve our systems of education.

"Our countries' education systems are faced with major difficulties, which reflect a change in the very nature of what is being taught. Preparation for life in tomorrow's world cannot be satisfied by a once-and-for-all acquisition of knowledge and know-how. Every bit as essential is the ability to learn, to communicate, to work in a group and to assess one's own situation. On the other hand, if tomorrow's trades require the ability to make diagnoses and propose improvements at all levels, the autonomy, independence of spirit and analytical ability which come of knowledge will once again be indispensable".

EC White Paper, 1993.

3.2 WHAT INDUSTRY SEES AS INADEQUATE IN EDUCATION

Industrialists stress the point that there is an INCREASING GAP between economic and social realities and the output of our education system. We are running the risk of an increasing mismatch between the requirements of our new environment and the capabilities of our people and our institutions.

At this stage what seems important to stress is that the picture is far from homogeneous; at national level all over Europe, there seems to be a wide variety of achievements, ranking the schools from excellent at the top to weak or even bad at the bottom.

Beside numerous strong points, and some well identified operational weaknesses, we want to stress some WIDESPREAD DEFICIENCIES tied with basic education. To mention the most relevant areas :

* at an **intellectual** (mental) level :

- learning capacity: the base for continuous learning
- mastery of own language: to communicate clearly with other people both orally and in written form
- critical assessment: ability to think through a problem or a situation
- literacy in maths, sciences and technology: the base for learning today's and tomorrow's technology
- openness and alertness to the complexity of technical, economic and socio-political environments.

* at a **behavioural** level :

- initiative, curiosity, creativity and innovation
- flexibility
- commitment to decide, to get things moving and to achieve
- professionalism, excellence, distinctive competitive edge
- communication including languages and team work
- decline of discipline

Among the **major criticisms** raised by the ERT companies let us mention :

* The weakest part of the education system in most European countries is the primary and secondary education.
* The educational institutions, most of the time, organise teaching instead of learning: too much teaching and not enough coaching.
* The educational institutions are too separated from real life. Their connections with working life are weak.
* In many European countries, schools are rigid and slow to react in practice, and remain impenetrable to external demands and challenges as a consequence of their centralisation and bureaucratisation.
* Far too often, school systems "specialise" young people and trap them into a line of study at a too early stage, out of which they cannot easily change because of the lack of crossover opportunities between these lines of study.
* An information revolution is taking place. But multimedia and computers are not yet present in the classrooms.
* The existence of too many disparities among scores of European pupils raises questions about the differences in the education systems and the risk of creation of discriminatory situations amongst European citizens.

3.3 Primary and secondary education as the weak links

For these deficiencies, the schooling system (pre-school, primary and secondary school), in many countries, is considered as the WEAK LINK of the educational chain.

3.3.1 Deficiencies regarding the skills demanded by companies arise during the compulsory schooling period and probably during the primary or even the pre-primary level.

This period is crucial in order to shape the future full personality, in the broadest sense of the word : not only developing brain capacity of course but also willpower, sensitivity, feeling for efforts, creativity, curiosity, social contacts in space (anthropology) and time (history), solidarity, interdependence ... all these elements are interlinked and interacting.

Not only are the knowledge and pedagogical competence of the teachers important at this stage but also their attitude vis-à-vis life in general. This observation applies to the family too as an essential part of the educative process as well. Their message (either explicit or implicit) and attitudes may have many influential effects, from supportive to counterproductive.

3.3.2 *A radical criticism of primary and secondary teaching*

In certain European countries, experts in education have confirmed the criticism made by industrial leaders and university rectors [14]. This presentation, of course, oversimplifies the situation which differs from one country to another, also from one school to another. But a cry of alarm must certainly be raised.

Insufficient mastery of mother tongue

Students no longer know how to analyse a phrase. Their understanding of texts is weak. According to recent surveys there is, in France and in Belgium, 40 % "illiteracy", that is to say, people unable to understand the texts of instruction which circulate throughout an enterprise.

Decline of discipline

Attitude of "zapping", refusal to deepen power of reflection.

False egalitarianism

* false vision of equality of opportunity
* refusal of emulation and selection as bases of personal effort and development
* risk of levelling down : by panicky fear of elitism, one runs the risk of ruining the quality for everyone.

Premature professionalisation

Instead of educating schoolchildren to think for themselves, most European systems attempt to mould them directly for professional success as early as possible.

A certain contempt for culture

Culture is often considered useless in a context of hasty professionalisation.

3.3.3 *The majority of countries suffer from a deficiency at this level and have embarked on the road to reform.*

"Successive reports have indicated the failure of English schools to equip a large majority of school leavers with even basic skills. Inspectors' reports too often find that pupils are not sufficiently challenged by the teaching they receive, particularly in inner-city schools"[15]. Hence, the 1988 Education Reform act in the UK.

---

[14] See notably, Schmitz N., Livre de poche pour Ministre de l'Education ou susceptible de le devenir, Entretien avec J. de Romilly, Brussels, Presses Universitaires de Bruxelles, 1993 and de Landsheere G., Le pilotage des systèmes d'éducation, Brussels, De Boeck Université, 1994.

[15] A Survey on Education, op.cit.

In France, "the actual programmes at the same time have great encyclopaedic requirements and suffer from a considerable laxness concerning the fundamental training schemes:" (F. Bayrou, Minister of State Education). "The school system should not be allowed to remain in this state. The pupil's failure has become evidence for everyone beyond all political argument.". As a result the proposals for reform have been gathered into "a new contract for the School system".

The same is also true in the United States which are being "eroded by illiteracy". A wide-ranging survey shows that the basic education of 90 million Americans is insufficient (US Ministry of Education). In the US, "the lack of a core curriculum encourages a shopping-mall approach to education : pile up the soft options and leave the hard stuff on the shelves" [16].

---

16 ibid.

CONCLUSIONS

Education is a necessary but not a sufficient condition

All what we have said concerning the importance of education should not lead us to overstate the ability of training to curb long-term unemployment. For a growing number of people, particularly in the USA, the real problem lies not in a lack of job-specific skills but in a surplus of social pathologies : too many people with too little self-discipline, self respect and basic education to fit easily into any work place [17]. Moreover, heavy investment in training cannot compensate for poor management or misguided product strategies as IBM has found to its cost [18].

One should always bear in mind that the family accounts for educational success and failure for more than the school. As a result, "the disintegration of the family in much of the West is likely to frustrate government attempts to boost educational results by tinkering with schools" [19].

---

17 Training for Jobs, op. cit.

18 ibid.

19 ibid.

PART II

A VISION FOR EUROPE

"Prenons garde de ne pas aborder l'avenir à reculons"

(P. Valéry)

INTRODUCTION

As stated in Part 1, there exists a substantial consensus concerning the inability of our educational institutions to adapt fast enough to the transformations presently unfolding in our world. An unanimous cry of alarm has been issued by European industrial leaders, the Rectors of European Universities, politicians, international organisations (OECD, EC, UNESCO, ...) and experts in education : there is a growing gulf between the slowly adapting educational institutions and a society in rapid transformation.

This gap is dangerous, as it threatens Europe's ability to meet the new and complex challenges of today's world : challenges which hold out considerable opportunities, but at the same time involve the European society in tremendous risks. A number of fundamental problems are at issue here : for example, our international competitiveness, the defence of our democratic ideals, the battle against unemployment and social exclusion, the raison d'être of the European techno-structures, our voice in the international arena, etc. ...

Therefore there is a strong need for a converging **European vision** in the field of education. Change, particularly systemic and global change, will not be possible without a vision. By vision we mean "a framework for the future". It indicates the future we want to build and our key assumptions for a better society. In a long term process of change, the role of the **vision** is essential because it provides the mean **to be pulled by the future instead of being pushed by the past**. If we want to mobilise the creativity and the energy of all people involved, we have to propose and discuss with them the key ingredients of the future we want to see happen. The starting point of any fundamental change process lies in a clear statement of a tangible vision.

1. TRAINING HUMAN BEINGS

The primary purpose of education needs to be restored to its proper place : this purpose is human development. It must not be downgraded to a poor second place, well behind the needs of the economy.

We believe that our society and our competitiveness will be defended more effectively by people who have received a high-quality general education.

The major goal of an educational system is to enable each individual to fully develop his or her personal potentialities.

1.1 Training people as people first

In a society like Europe, which imposes ever-growing demands from the career point of view, are we to "produce" men and women "ready for use", utilitarian, saleable, interchangeable ? Or do we opt for cycles of "initiating" courses, which would aim at conveying the art of learning by better learning means ? This document contests the legitimacy of purely utilitarian education, driven by emergencies, and instead aims to herald a form of education which deals with human existence in its full richness and complexity [20].

Yet the risk of a purely utilitarian education really does exist. We reject this approach for several reasons.

- In the longer term, it constitutes a serious threat for democracy and for its citizens or its people, because it only considers human nature from a single aspect, which is its most banal aspect : producer-consumer. If it were to be adopted, would it still allow a democracy to exist in the medium term ? We must beware of this problem, because in a period when jobs are scarce, such temptations are strong [21].

- Education is transferable while many skills tend to be job specific. Therefore the socio-economic returns on basic education as a way of thinking are higher than those on specific training.

---

[20] Harmel, P., Valeurs européennes, Louvain-la-Neuve, 1993.

- Tayloristic models are no longer relevant in the field of education, nor anywhere else. The assumption that all children will learn at the same pace is outmoded and does not lead to the best personal development.

- It is impossible to predict specifically today what business will need tomorrow. The assumption that education should adjust to jobs, even at the level at which it is postulated, i.e. the socio-economic level, is a myth. It derives from a reductionist and totally wrong vision, both of social matters in general, and of competencies and so-called aptitudes. Trying to match education to jobs, like fitting together the pieces of a jigsaw puzzle, implies having a rigid vision of jobs and a mythical vision of recruitment.

It is therefore important that we should restore education to a status independent of economic imperatives. There are significant links between these two fields, but one must not reduce the role of education to the mere training of professional "resources", at least during the early years of schooling.

1.2 Training the whole human being

1.2.1 Developing the mind

The prime, and most fundamental, aim of education is to learn how to :

* know oneself
* situate oneself and listen to others
* reason and think
* balance reason and passion.

As Pascal said : "Man is visibly made for thinking. Thinking as he should is his whole dignity and merit, and his duty. However, the order of thinking is to start with oneself, and one's author, and one's purpose. But what does the world think about ? Never about those three; but rather about dancing, playing the lute, singing, writing poetry, tilting at the ring, etc. and fighting, becoming king, - without thinking about what it means to be king - and to be Man".

---

21 ibid.

1.2.2 Developing the social being

* communicating : speaking, listening, negotiating, etc.
* working in teams
* coping with group dynamics
* accepting people as individuals : tolerance, genuine interest in people, caring for people, etc. ...

1.2.3 Developing the whole human potential

The transmission of knowledge, although vitally important, in itself is not enough. Above and beyond knowledge, it is important to develop a know-how to do and a know-how to be. As far as knowledge is concerned, the object is learning how to learn and think, far more than accumulating facts.

1.2.4 A broader view of competence [22].

Competence is not only technical skill and knowledge. It is much more. It contains also issues of behaviour. A modern view of competence includes :

* knowledge : facts, methods, key concepts
* skills : knowing what to do
* experience : learning from success and mistakes
* contacts : social abilities, network of contacts, influence
* values : willingness to act, believing in and taking responsibility
* power : physical and mental energy.

---

[22] Keen K., Competence, Proceedings of the ETTE 1990 Conference, Amsterdam, 1990.

2. TRAINING CITIZENS

2.1 The compass : basic democratic values [23]

Democracy needs "virtues". We are often hesitant to say that word because it seems outmoded. After all, it is just another way of saying "values", and also has the merit of not being over-used in the technical vocabulary of the economy. Learning the basic values is important, and we ought surely to develop this aspect in education. Naturally we should also learn what means are available to obtain personal and original answers to the great questions which involve these values, and all the great questions which people encounter in the course of their lives.

A democracy which wishes to allow its citizens to develop their individual talents to the fullest extent thereby takes on a moral commitment about their education. In other words, it must guarantee them the right to education. This is not just because there is that moral obligation, but also because education will enable all citizens to express themselves more freely, more profoundly about the problems facing society. Ultimately, the democratic system itself will benefit.

When we say the word "democracy", at first we only think of "freedoms". While it is true that the democracy that should be built is a regime of freedoms of thought, expression, association, trade, etc., it is not freedom which is the fundamental virtue of democracy, but humanity. What does this mean ?

Democracy is barely possible if we do not believe in human resources. That is why, through this prime virtue of humanity, democracy allows the unrestrained deployment of the talents which each individual possesses.

This development of each person's abilities for the ultimate benefit of all constitutes the major power of democracy and its greatest asset. In this context, freedom must prevail as the indispensable corollary of humanity, because democracies believe that human resources are inexhaustible. The talents of each individual are continually enhanced as they are used, and that is how democracy deploys freedoms.

---

23 Harmel P., 1993, op.cit.

It is literally vital for a democracy that each individual should develop his personality to the full and exceed his own expectations. Democracy can therefore help human beings to exploit their possibilities and fulfil their potential, and go further yet. This must be the objective of education. However, it is dangerous to take democracy for granted. It also makes certain demands : one of the most important is that the citizen must respect a "fundamental pact" between the inhabitants of a region and without which, communal life would not be possible in a democracy. This pact, which always imposes demands, it is true, is also the best guarantee that freedoms will exist for all. It is an "agreement" to live together in the best conditions of humanity, and must, of course, be respected by the legal authorities, but also, and this is the basic requirement, by the citizens. Respect by them of this "common agreement" is its most effective power.

2.2 Europe : becoming citizens of various communities

Local and national communities have been the roots of our civic and political commitments. But Europe is in the making and it is important that its young people feel implicated in this emerging community. There is no contradiction between Europe and countries or regions where they will take an active part as citizens. It is simply a new dimension adding to the other ones.

The specificity of Europe should be part of key programmes of the education systems. "Europe is a very old civilization". Education should stress the meaning of being a European citizen today.

- A common culture based on diverse expression
- Shared values :
  - . Democracy
  - . A "civilised" society
  - . Social justice
  - . Solidarity
  - . Diversity
  - ...

- A European blend of capitalism : the social market economy.

- A better understanding of Europe as a common space where social and economic welfare can be achieved with greater success than on a purely national level.

"Building European Education" implies that our educational systems enter into European networks of exchange and cross-fertilisation, for both the students and for the teachers.

Since competition becomes global, education should give Europe the best educational infrastructure for keeping ahead in technology, business, politics, etc.

2.3 Awareness of a global planet

The finality of Europe, this country of such diverse components, does not lie in itself. It is an integral part of a planet which is increasingly living in a global dimension.

Europe has a fundamental responsibility towards the poorest part of the world's population.

"We shall never be sufficiently aware of how much, to the rest of the world, Western democracy appears to be a secure vault, a sort of enormous, over-protected Fort Knox. We must ensure that we demonstrate that what underpins our democracy is more the promotion of humanity and its values, rather than stocks and shares. Without losing sight of a certain economic realism, we should be able to give a more human image of ourselves to the outside world"[24]. That image is the very foundation of our continent.

European education must be aware of planetary problems, such as : the environment, sustainable development, demography, security, interdependencies.

Therefore we believe that our education systems should be as <u>open</u> as possible and not oppose the new dimensions of a modern citizenship : region, nation, Europe, the world.

---

[24] ibid.

3. CREATING A LEARNING SOCIETY

The Information Society so highly praised by the EU Delors White Paper must be completed and matched by a Learning Society, if we do not want to fall into an over-informed world and a valueless culture based on "zapping" and "patchwork" superficiality.

3.1 A Learning Society [25]

European companies are becoming (or already are) Learning organisations. These Learning organisations have to be integrated into a Learning Society which rejects the fallacy that learning ends with childhood. Everyone can continue to learn beneficially throughout his life. It is a revealing fact that it is impossible to find a living person who believes him/herself incapable of further useful learning. The Learning Society accepts the logic of this, and provides for all to continue their learning throughout life. What is proposed here is not quite what we have observed in our society yet.

A Learning Society would be one in which :

- learning is accepted as a continuing activity throughout life;
- learners take responsibility for their own progress;
- assessment confirms progress rather than brands failure;
- capability, personal and shared values, team working are recognised equally with the pursuit of knowledge;
- learning is a partnership between students, parents, teachers, employers and the community, who all work together to improve performance.

Learning empowers. It creates choice. Without choice, we cannot be free. Francis Bacon was one of many who have claimed that "knowledge is power"; in today's "Information Society" this is even more true than it was in the seventeenth century. The idea of a learning society offers a broad vision. It rejects privilege, the idea that it is right for birth to determine destiny. It transcends the principle of meritocracy, which selects for advancement only those judged worthy and rejects as failures those who are not. A

---

25 This section is almost entirely based on Sir C. BALL: Learning Pays, Interim Report, RSA, April 1991, 48 p. - Profitable Learning, RSA, January 1992, 10 p. - The Learning Society, in RSA Journal, May 1992, pp. 380-390

learning society would be one in which everyone participated in education and training throughout their life. It would be a society characterised by high standard and low failure-rates.

To leave school signifies transition from one form of learning to another, not a cessation of learning. In a learning society, there would inevitably be a need for special provision for slow learners, late developers, the long-term unemployed, eccentrics, drop-outs, the damaged, the deranged, and the desperate. This report recognises a collective social obligation to provide for their needs, and to offer them help and support without indignity.

It might be difficult, even impossible, to graft on to the existing system of initial education the missing parts of a system of lifelong learning. This is primarily because the existing system is designed on the false principle that initial education is sufficient. The creation of a learning society depends on the recognition that everyone is capable of benefiting from continuing their learning throughout life.

3.2 Continual Education "From the cradle to the grave"

3.2.1 The EDUCATION CHAIN

If we reason in terms of lifelong learning, the various educational programs become more interdependent. They will have to become progressively part of a system. Those who practise or manage education should not only be concerned by one segment but also by the other segments that form an integrated system. A systemic approach is necessary if Europe wants to create lifelong opportunities. Each element of the "Education Chain" will influence all the others. **The quality of the chain will be that of the weakest link.**

Each link of the chain is important and Europe cannot afford to have a weak link. In order to achieve lifelong learning we have to strengthen the whole educational system.

The single most important measure of the success of schools is how far they can persuade and encourage all students to continue their learning, and as adults to be responsible for maintaining it.

In the learning society[26], lifelong learning, depicted as the Education Chain is divided into five stages : socialisation, citizenship (basic education), training for life and the first job, enhancing knowledge and updating/upgrading skills.

The socialisation phase comprises crèches and nursery. Its function is to provide the learning of language and of interaction with peers.

Basic education structures the whole citizen. Its function is to provide that foundation of skills, knowledge, attitudes and experience which are essential to later learning and ordinary life. The idea of a national curriculum, a range of knowledge and skills common to all, is central to this stage. But its role is to define the capability and understanding that everyone needs, and can learn, not to attempt to encompass the whole range of human knowledge.

Training, leading towards life and the first job, is a transitional stage between basic school education and either higher education or adult learning. Its purpose is to develop "workplace readiness". It is concerned with both the general and specific knowledge and skills which enable people to enter the workforce as effective members. No one is in principle incapable of learning.

The "enhancing knowledge" phase is the fourth stage of the Education Chain and corresponds to tertiary (higher) education. Its function is to learn some specific skills, relevant to the needs of society, in centres of excellence.

Finally, Adult Education aims to the updating and upgrading of skills and starts as soon as people leave schools, tertiary education institutions or are hired for their first job.

The concept of the chain can be presented as follows.

---

26 This paragraph is inspired by Sir C. Ball, The Learning Society, 1992, pp. 384-385

Links		*Stages in Learning*
Link I	*PRE-SCHOOL EDUCATION*	*Socialisation*
Link II	*BASIC SCHOOL EDUCATION (the first 9-10 years)*	*Citizenship*
Link III	*GENERAL EDUCATION (final 2-3 years at school)* / *VOCATIONAL EDUCATION (training school)*	*Towards life & the first job*
Link IV	*HIGHER EDUCATION (university & technical college)*	*Enhancing knowledge*
Link V	*ADULT EDUCATION*	*Updating/ upgrading skills*

The Education Chain

52

- More and better bridges between the various elements of the system have to be created to mobilise the full potential of the whole and reach a dynamic synergy.

- A better distribution of the educational tasks could be achieved if we considered them to be a part of a whole.

- A greater diversity could also be organised inside each link of the Chain.

- Research on education should focus on these concepts of lifelong learning and Education Chain. It will be extremely useful to understand better the learning process for each link of the Chain, i.e. for each age group. A global approach to education requires a better knowledge of learning capacities and levels of performance related to age.

- A Global Policy for Education should define what kind of profiles are needed at the end of each link of the Chain and what are the minimum requirements.

3.3 Partnerships and shared responsibilities

Such a global approach will be based on the interplay of MANY ACTORS.

The main actor, of course, will be the INDIVIDUAL. To the individual, one should say : "Please accept your responsibility for keeping yourself professionally up to date. Build a personal strategy which includes reading, open learning, university continuing education courses and television broadcasts, all aimed at your own needs. Do not wait for your company or university to provide for you - but if it does, take advantage of it. Seek out your own information sources and widen them through further searching. Use a library and learn how to use it more effectively. Find a way to have access to an information retrieval system ; develop your "profile" of needs for such a system, seeking, if necessary, the advice of a modern librarian. Above all, enjoy the process, this means that at least some of searching and learning should be directed to your peripheral interests, and should be fun. Eventually the entire process will be fun"[27].

---

[27] Weimar B., Assumptions about University-Industry Relationships in Continuing Professional Education: a re-assessment, European Journal of Education, Vol. 27, n° 4, 1992, p. 395.

OTHER ACTORS will play an influential role according to the level concerned :

- Family has an important role during the schooling period and for major "upgrading" effort during a professional career.

- Professional bodies such as speech therapists, psychologists, social workers, ... should be more involved in the education system in order to overcome some human and social deficiencies.

- Industry becomes a major player when adult education is concerned. At the tertiary education level, a greater cooperation between industry and education is needed.

- Professional Associations and Trade-Unions could be very influential as "boosters" or "brakes" in the evolution of education systems.

- As far as Governments are concerned, they will play a key role in defining and supporting the proper policies for the whole Education Chain.

Therefore one might consider that Partnership and Cooperation between these various actors become a key element of progress.

While partnership is important for making the resources available, the responsibility for the development of each individual is a personal one. In this respect, a new attitude needs to be developed.

"*Je ne t'ai donné ni visage, ni place qui te soit propre, ni aucun don qui te soit particulier, ô Adam, afin que ton visage, ta place et tes dons, tu les veuilles, les conquières et les possèdes par toi-même. Nature enferme d'autres espèces en des lois par moi établies. Mais toi, que ne limite aucune borne, par ton propre arbitre, entre les mains duquel je t'ai placé, tu te définis toi-même. Je t'ai placé au milieu du monde, afin que tu puisses mieux contempler ce que contient le monde. Je ne t'ai fait ni céleste ni terrestre, mortel ou immortel, afin que de toi-même, librement, à la façon d'un bon peintre ou d'un sculpteur habile, tu achèves ta propre forme*" (Pic de La Mirandole, Oratio de hominis dignitate, quoted in "L'Oeuvre au Noir", by Marguerite Yourcenar).

BEST COPY AVAILABLE

4. EDUCATION AS A POLITICAL PRIORITY FOR EUROPE

4.1 A strategic area

Since the quality of our democratic systems and our competitiveness are at stake, education is certainly to be considered as a political priority for Europe.

In a knowledge economy, education becomes the major thrust in the creation of sustainable competitive advantage. Like many others, we reject "a European competitiveness model based on low wages and low skills. The only valid alternative for Europe to survive and remain competitive in world markets lies in a strong capacity for innovation and quality. This can only be achieved with a highly and broadly skilled workforce. We refuse social exclusion as a permanent feature of our societies and we believe that it is better to invest money in education than to spend it later on repression of crime, therapies, etc ." [28].

Europe will not be complete if we do not try to improve the compatibility and the interdependence between our various national education systems. That does not mean that those systems will be unified, or that we will lose our diversity which is one of our major strengths. It means that a new dimension is emerging and enriching our perspectives.

4.2 A European dimension

Many governments have already acknowledged at their level the strategic importance of education. "In recent years there have been a number of important qualitative and quantitative steps forward in most Member States : a general improvement in the population's level of training ; an increase in the level of school enrolment ; the recovery or development of investment in education ; an increase in the number of teaching staff etc. Reforms of university systems and education policies and structures - some of them major - have been devised and implemented, the effects of which should be felt throughout the 1990s : growing involvement of the private sector ; decentralisation of the management of education systems ; an increase in local and regional initiatives" [29].

---

28 IRDAC, 1994.

29 EC White Paper, Growth, Competitiveness, Employment, Brussels, 1993, p. 119.

But a European approach is necessary and will be to the benefit of all European regions. While some issues are best addressed within national or regional contexts, it is obvious that coordination and joint efforts at European level are often appropriate.[30] We entirely support this perspective and the concrete recommendations of IRDAC (see insert). We believe that there is a need for a European education policy which is transparent, innovative and relevant.

Developing a European education policy which is transparent, innovative, and relevant

In many areas, approaches at European level are required in order to respond to the scale and nature of industrial change. IRDAC recommends :

Improving **transparency and comparability across Member States**, by moving towards common terminology and language in education and training, as a first step to voluntary and demand-driven convergence.

Stimulating innovation in education and training by facilitating the exchange of experience and best practice, and by encouraging the emergence of innovative learning approaches.

Ensuring that **European initiatives meet clear goals that are relevant** for European society and economy. Greater **use of the EU Structural Policies for training actions with a strong European dimension**, such as technology transfer and the scarce use of expensive training resources.

Achieving much greater synergy **in European Union R & D and education initiatives.**

IRDAC-1994

The EC white paper puts forward some concrete initiatives to be taken by the European Community and we support them [31]:

- to develop still further the European dimension of education ;
- to foster innovation in education by increasing exchanges of experience and information on good practices and developing joint projects ;

30 IRDAC, op. cit., p. 28.

31 EC White Paper, 1993.

- to promote European-level mobility among teachers, students and other people undergoing some type of education ; that is to say physical maturity and the "virtual" mobility made possible by the new technologies of communication;

- to set in place a political framework for the medium and long-term measures for linking the systems of continuing training and continuing credits with measures for increasing flexibility and reducing working time ;

- to set clearly and firmly the essential requirements and the long-term objectives for measures and policies in this area, in order to make easier to develop a new model for growth, competitiveness and employment in which education and training play a key role.

The report aims at proposing a long-term vision that will guide concrete decisions to be made in these matters.

4.3 Strategic investment and consistency

Some people claim that the countries of Europe invest a great deal, even too much, of their financial resources in Education. It is nevertheless legitimate to pose some questions about the validity of such a claim. Figures 1 and 2 indicate the actual costs of the investment by some European countries in the field of education.

Figure 1 shows that expenditure on education in percentages according to GDP vary between 5.6 and 6.1 for the European countries. These figures are slightly greater for Sweden (6.5) and for Finland (6.6) (OECD 1993). Is this truly enough? This consideration is made all the more serious as Figure 2 shows a general tendency towards a decline in the investment of public spending in these education systems, a decline measured in percentage terms.

This downward trend could certainly be justified by a demographic decline. Yet while resources diminish, the demands made by society on schools are increasing. It is here that the consistency gap can be found: the decline of resources runs parallel with an increase in demands of service. If Europe truly wants to achieve the Education it needs, it must accept the allocation of a significant portion of its GNP towards this. Europe must rediscover a certain coherence between what it wants out of its overall education system and what it is prepared to invest to achieve it. It must provide the means for its own policy.

Yet, due to the economic crisis across Europe, there is little hope that the Member States will be able to invest more resources in Education. We must therefore turn to the private sector. From figure 1 we can infer that private investment in Education seems to be non-existent in Europe, with the exception of Germany and Spain. Questions can be raised in the private sector about possibilities to increase its financial participation in their national education systems. This will allow them to respond positively to the demands made by society and industry.

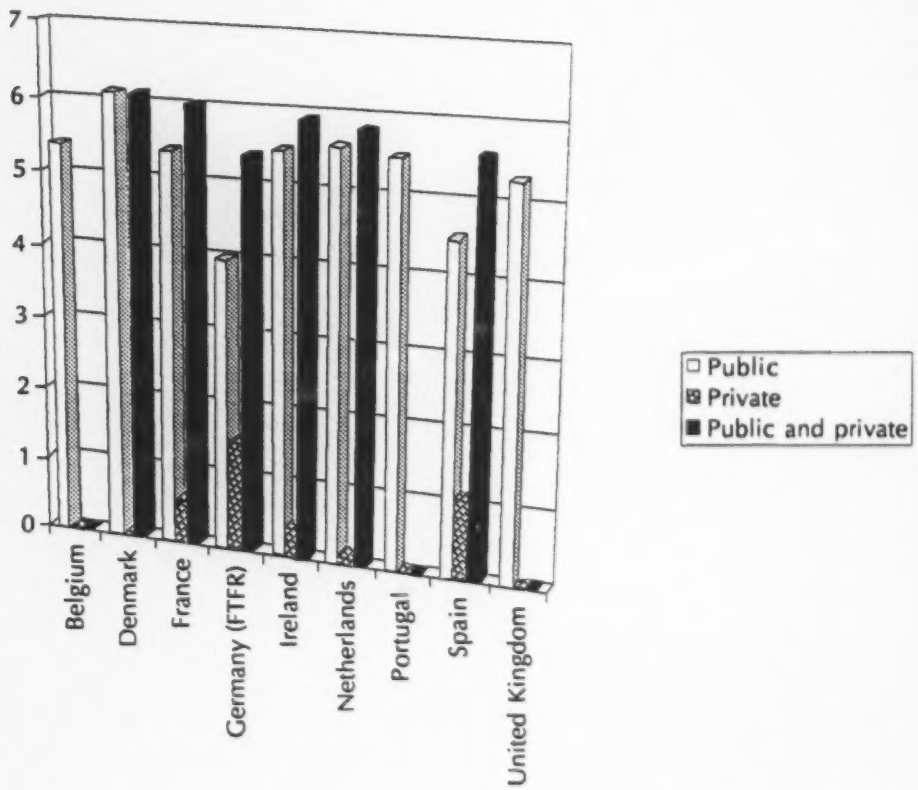


Figure 1 : Expenditure on education as percentage of GDP (OECD 1993)

Figure 2 :
Decline in public investment in education systems (OECD data)

PART III

STRENGTHENING

THE EDUCATION CHAIN

"Des têtes bien faites, plutôt que des têtes bien pleines"

(Montaigne)

I. INVIGORATING PRE-SCHOOL

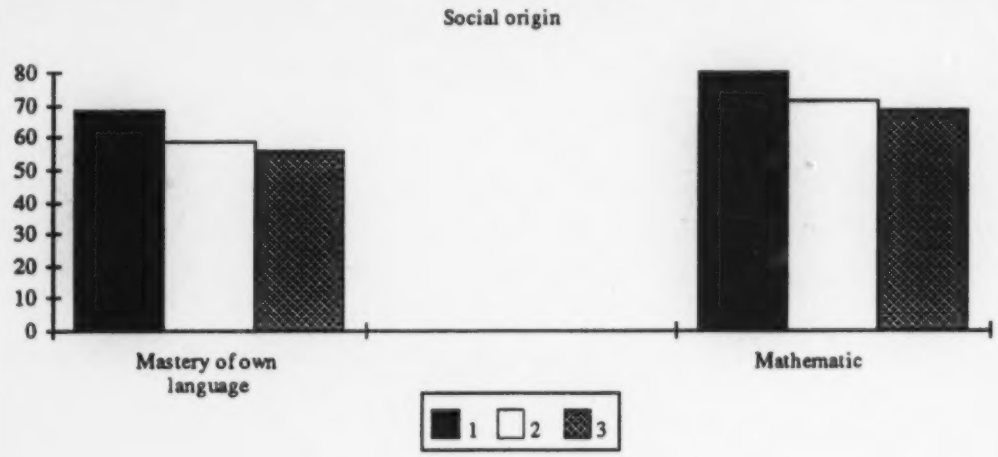
The first years in the life of every human being are decisive. That is the time when the individual forms his/her personality, and learns to live in a world where other human beings interact. The first experience is acquired of the conflict between personal wishes and what other people want. During these years, this construction of a personality depends on a large number of factors external to the individual. To lend clarity to this presentation we shall look at just three of these : family, social environment and primary school.

1.1 The role of the nuclear family

It is important to bear in mind the role of the family and the family environment in the educational process. Researchers have shown the decisive role played by parents in both the psychological and cultural development of the child. Language deficiencies, for example, are often due to the cultural impoverishment of the child's surroundings. The backbone of the child's personality is built up in the very heart of the family. Openness of mind, human relations and general attitude to life find their source in this nuclear cell. All of this leads us to think that the family environment counts far more than school as far as success or failure at school is concerned. A child living in a family environment which values education has far more chance of scaling the academic ladder during his/her subsequent career as a pupil and student.

1.2 Impact of the social environment

In our society, school generally tends to be presented as a neutral place, without social conflicts. However, school is never socio-politically neutral, since it aims at a certain way of organising society. The ideology underlying this presentation has its *raison d'être* in an ideal of making education accessible to all: one school for all. A noble ideal, it goes without saying, but unfortunately, it does not match the everyday social reality which schools have to face. As figure 3 shows, socio-cultural background has a real impact on the schooling of any child.



Parents are:

1. Managers, liberal professions
2. Farmers, artisans
3. Clerical and manual workers, the unemployed

Figure 3 : Learning achievements are affected by social background

Many studies carried out by educational anthropologists on the behaviour of children from various ethnic minorities in the classroom are very eloquent on this point. They show a significant connection between the problems which these children encounter at school, and the problems in decoding the implicit requirements of teachers and the school. Children talk when they are not supposed to, but say nothing when teachers expect answers, and interpret the visual signals from teachers and other pupils incorrectly.[32] This seems to be even more the case when one considers that the "expectations" of teachers seem to be understood better by pupils from the middle and upper classes. Teachers often expect more of these pupils, and *de facto*, pupils who are expected to do well make much better progress than those who are expected to under-achieve, which is reinforced by the fact that communication with the latter group seems to be difficult to establish, or even impossible.

European educational systems convey a certain culture which has no pretensions to being universal. The majority culture in the school environment is that of the middle and upper classes. Merely accepting this situation would also be accepting the social exclusion of children from another social and cultural class, and who are unable to adapt to the

---

32 Duru-Bellat M. - Henriot-van Zanten A., Sociologie de l'école, Paris, Armand Colin, 1992, p. 183

requirements of the dominant culture. This exclusion is socially and politically dangerous in the medium and long term for European democracies. To overcome this real cultural deficiency, the concept of the educational chain provides some elements of the answer.

1.3 Structured pre-school experience.

1.3.1 Its « raison d'être »

In many European countries, compulsory schooling starts at around the age of 5 or 6, when children attend primary school. However, the educational chain should start earlier than this. Education as such does not start at primary level, but well before. It is the nursery school which has such an important role to play in the child's psychological, cultural and human development.

The earlier that children start school, the higher their chances of being successful at school. The number of pupils who have to repeat a year at primary level varies from 30.5% for pupils with no nursery school experience (which is a very specific group, it is true), to 10% who have had 4 years of nursery education, and 18.3% for those who only attended a single year.[33] The effects of pre-schooling can even be felt at the secondary and higher levels of education. Moreover, recent studies show that children who attended pre-school programmes have greater chances on the labour market, and run less risk of being among the poorest groups in our society. Pre-school has to be seen as part of a long term investment.

"One indisputable concrete experience shows that, for children all faculties which are not encouraged will cease to develop and then will atrophy; once this moment passes, each subsequent encouragement will be unable to revive them...the education received by the infant will influence all his mental structures and an imperfect education may discourage subsequent remedy; some talents not developed at an early age will develop either poorly or even not at all later on" (Institute of France).

Therefore, pre-school programmes benefit children from all socio-economic groups, but their effects are more notable in the case of children from low-income households, since they reduce the comparative disadvantages of such children, and make it easier for them to enter formal education later on. They are also to help in the identification of learning

---

33 ibid., p. 31

problems, thereby lowering the rate at which children are held back in school in later years.[34]

1.3.2 What do children get from pre-school?

At the level of pre-school, two institutions should be focused on: crèches and nursery schools.

a) Crèches should not be parkings where parents send their children when they are at work. A crèche is a place where children interact with others. Here, it is already possible to discover some cultural or speaking deficiencies. People looking after children who are under the age of three should therefore be professionals who are able to deal with those deficiencies. Nonetheless, a partnership with parents should be established. If parents are indicated what they could do with their child, the socio-cultural handicap can be compensated.

b) Nursery schools have various goals in the process of educating children:

- sensory development
- language: helping a child to speak properly and to acquire new vocabulary.
- foundation of reasoning: this can be done through different games and awakening activities
- socialisation: learning how to interact with other human beings.
- creativity, curiosity, initiative: playing, acting, pottering.

These goals are in fact the foundation for rapid learning and children will discover that they can enjoy what they learn.

1.3.3 The curriculum and partnership

The quality of programmes in nursery school need to be excellent, since this is the first link, and therefore the basis of the Education Chain. Courses need to take account of the "deficit" which characterises certain social groups. The purpose of this type of compensatory education is to correct or alleviate the cultural deficiencies of least-favoured families, by offering children educational stimulation before they enter compulsory schooling. However, it would be illusory to believe that these compensatory courses, whose content would need to be devised depending on the circumstances in each country, would suffice. They can only bear fruit if they are accompanied by a genuine partnership with the family.

---

34 ECLAC-UNESCO, Education and Knowledge: Basic pillars of changing production patterns with social

Children cannot develop in a dissociated manner in two such different environments: family and school. Partnership is the most suitable means of bringing these two environments together, whereas today they are too often in opposition. The work of the nursery teacher must move towards cooperation with parents. The parents must be actively involved, in view of the impact they have in the formation of their child's personality. This partnership could be a way to educate parents for the job of being educators. As a matter of fact, parenthood is becoming a job in itself!

For numerous reasons young people today have been cut off from their historical-cultural roots. Such uprooting of course has significant consequences on their ability to learn. One solution would be to integrate the nursery schools into the lives and " retirement homes " of older people. Interaction with their elders will promote in the children a sense of the cultural tradition which spans the generation gap, and subsequently provide them with a sense of belonging to a tradition.

In cases where the child's deficits in comparison with the requirements of the school are great enough to require this, the nursery school should receive the necessary resources to cooperate with other professional bodies (speech therapist, psychologist etc.). In an ever more complex world, schools cannot have a monopoly on education. So partnership is essential.

1.3.4 Towards a universal access to nursery school?

In short, pre-schooling stimulates the development of the child's sociability; it allows creativity to flourish; it encourages language skills, and by this means, the development of the instruments of knowledge; moreover, it allows any problems which the child may have to be detected early.[35] It is the first link in the educational chain. Every effort must be made to ensure that this link is strong.

Nursery school therefore plays a fundamental role within the Education Chain. Lengthening education should be considered not at the upper end (as is usually the case) but at the lower end, by granting universal access to three years of nursery education, as it is already done in some European countries.

---

equity, Santiago, 1992, p. 216

35 TASK-FORCE Human Resources, Combatting failure at school, to avoid social exclusion, in Education/Training n° 5. June 1992, Brussels, Commission of the European Communities, p. V

We recommend that Governments should provide universal access to pre-school. By giving this universal access, the system gives genuine possibilities to the least-favoured classes to overcome this cultural deficit which will enable them to integrate better into the school system, and into society as a whole.

2. UPGRADING BASIC SCHOOL EDUCATION

2.1 Repositioning Primary and Secondary Education

2.1.1 Broadening the concept of competence

In view of the structural uncertainties among which Europeans live, education must broaden the competence of pupils, and open up issues rather than closing them off. This broadening of competencies will enable future workers to have the necessary flexibility during their professional career. As they will change careers several times in their lifetime, they will handle these changes better if their skills are broad and general. Therefore, we recommend a strong basic education footed on general knowledge instead of too specialised teaching.

2.1.2 Training judgement, a critical mind, the ability to understand

Integration of individuals into a culture, into a society has always occurred via a task of re-interpreting the past, re-adapting our heritage. School has a decisive function in this process as a symbolic structuring mechanism. This function is assumed via relation to past events (particularly those which founded a civilisation), via contact with the works - and not just written work - through which the present culture provides itself with a minimum of roots. This process of reinterpretation of the past, through the eyes of the present, actually builds the future.

So it is up to school to provide the tools necessary for training the critical mind. This can be trained by solving mathematical problems, writing essays, analysing texts, engaging in debates on contemporary issues, art criticism etc. With this capacity for judgement, the pupil will be better placed to understand the "meaning" of the society in which he/she lives, and as a result, the education which he/she is receiving.

2.1.3 Providing meaning, coherence, perspective

Schools have an essential role to play in the construction of democracy. As Claude Milner[36] puts it so well, the power of authority can be resisted. He reached this conclusion after studying the French Revolution, Voltaire and Victor Hugo, and also

---

[36] Milner C., De l'école, Paris, Seuil, 1985, pp. 148-149

philosophers such as Plato, Descartes, Rousseau, Kant and others. It is actually via this historical, literary or conceptual knowledge that the individual is led to suppose that there are limits. One of the important tasks at stake in the school system is therefore preparation for both responsibility and active citizenship, as experienced in a democracy. Schools cannot ignore that, because the future of Europe is at stake.

Therefore, there is an urgent need not only for "learning to be", but also for "learning to coexist", to coexist with the biosphere, with our fellow humans within a rich diversity of cultural, religious, linguistic and ethnic identities. But above all, it will be necessary to "learn to share", because the imperative of solidarity is today a condition for our collective survival.[37] Solidarity is the means given to us to build democracy and prevent any type of tyranny. "Learning to be, "learning to coexist" and "learning to share" are among the roles of school, or more accurately, parts of its meaning. Through those types of learning, school will provide the coherence citizens need to acquire.

2.1.4 European citizenship and multiculturalism

The concept of citizenship cannot be reduced, in our opinion, to a national identity. We must work on the general principle according to which young people should be educated for a society where Europeanisation, internationalisation and globalisation play an important role, as stated in Part Two. While it is true that it is up to schools to educate the citizens of tomorrow, this must be done from a European perspective. This Europeanisation of citizenship does not mean a citizenship where cultural and national differences are denied. At all costs a harmonisation of cultures in Europe must be avoided, because it is precisely in its cultural diversity that Europe is being built and finds its greatest wealth. So Europe has to be built from diversity to cohesion and not to uniformisation.

Europe is impregnated with a philosophical culture of its own, as well as a development of exact sciences. If its sources lie in the Greek world, it was subsequently influenced by Judeo-Christian ideas. Thereafter, so many centuries of history conveyed by architecture, painting, sculpture and much more have given Europe a feeling of having solid cultural roots. Despite their national diversity, Europeans share a common historical and philosophical past. This past is the very foundation of this continent, and it is therein that beyond the disparities, a common link is found, which enables Europeans to share specific values which they consider to be European. This cultural heritage enables

---

[37] Tedesco J.-C., Education and Knowledge: Basic pillars of changing production patterns with social, (unpublished note), p. 9

Europeans to gain a better understanding today of the European civilisation in which they live.

2.1.5 European multilingualism.

The multiculturalism of Europe implies a multilingualism de facto. It is therefore of the utmost importance that a European can converse in the major languages of Europe. English seems to be the lingua franca of Europe. English being common to everybody, it will enable everybody to understand one another. As a consequence, it should be taught as early as possible in primary school. This would allow pupils to have some lessons, e.g.: history, geography, given in English as a means to practice and to learn the language. The best way to learn a language is when it is used for real like the teaching of a specific course, as just mentioned. Schools should either hire teachers who have English as mother tongue or/and use special television programmes and new technologies in order to allow pupils to learn the language. However, one should bear in mind that trilingualism (meaning the mother tongue, English and another European language) should always remain the objective.

We recommend also that the mass media, most notably television, should support the learning of foreign languages at school by developing appropriate programmes and, at home by broadcasting films both in their original version and dubbed, in order to enable parents to have a choice for their children. Further, a film broadcast in its original version should have sub-titles in the local language. There is, in fact, recent experimental evidence to show that this practice is beneficial for children's reading.[38]

2.1.6 Language and communication

Introduction

Various concurring sociological studies reveal that illiteracy has not disappeared in the industrialised countries. These studies show the frightening statistic that approximately 40% of the European population can be considered as uneducated, i.e. incapable of reading and understanding a newspaper article, a written note, a commentary (de Landshere, 1994). For example, from 1983, the Academy of Nice reported that 22% of the pupils who enter secondary education cannot read; 45% are incapable of executing a definite instruction conveyed by a written order and 72% are unable to comprehend the sense of one word from its context.[39] The mastery of the spoken word is one of the

---

38 Elley W.B., How in the world do students read? The International Association for the Evaluation of Educational Achivement, The Hague, 1992, p. 73

39 G. de Landsheere, L'illetrisme, une menace pour les individus et l'économie du pays, to be published

priority tasks of education. It is schools which have to carry out the task of teaching pupils to read, write and communicate. As a priority, in the coming years, schools will have to make every endeavour so that the level of illiteracy falls drastically, or even disappears.

This is even more so because in the next century, those considered illiterate will include those who do not know how to use computer terminals for the four basic operations: finding simple information in a database, posting and reading accounting entries in a pre-programmed table, writing a letter in a word processing programme and sending it by electronic mail, and completing tax and social security forms.[40] Linguistic illiteracy will be joined in forthcoming decades by technological illiteracy, which schools will also have to take into account. In this section, our remarks will be restricted to reading, writing, speaking and listening. Any deficiency in one of these three fields is the basis for illiteracy today.

Reading

It is a legitimate question to ask why reading is so important for the European economy. The reply to this question is, however, disconcertingly simple. Reading will become increasingly important, in view of the growing complexity of economic activity. This activity is tending to become worldwide, forcing written communication to take on a role which it had never assumed until now (e.g. electronic mail). The technology which has invaded most businesses forces employees to read more and more to stay at the level of professional excellence required by the economy.

Schools must therefore enable their pupils to understand, interpret, evaluate and use what they read. Reading is one way of structuring the thoughts of any person. In addition to developing this critical sense, any school leaver should also be capable of reading correctly out loud in the classroom any text in the official language of the school. However, it can be seen sometimes that pupils, with normal talents in other respects, experience difficulties when starting to learn to read, and it is hoped that "it will sort itself out in time". The following studies show how illusory is this belief.

Lundberg (1984) reports that, in a group of 700 pupils completing their first year of primary school, he found 46 subjects whose reading results were below normal. He monitored them until the end of their sixth year, at the same time as a control group including the same number of pupils who had, from the outset, been able to read to a

---

40 Gaudin Th., 2100: Récit du prochain siècle, Paris, Payot, 1990, pp. 35-36

standard matching their abilities. By the time they reached the sixth year, half the pupils who had had difficulties in the first year were still behind the pupils with the poorest performance in the control group. Eight pupils recovered, in that they reached the average for the whole group (700). Lundberg concludes: "We did not find any pupil who was particularly good at reading among those who were already diagnosed as poor readers in the first year".[41] Therefore, problems observed in the first and second years should be considered with the greatest concern. According to the statistics just quoted, the situation is determined practically in the first years of learning to read.

We recommend that schools set up programmes for children to learn to read in flexible ability groups during their first years at primary school. Children should learn at their own pace, which means that each child should receive the attention he or she needs. The necessary arrangements should be set up to avoid any reading problems for a child, whose future working life is already at stake, even if they are only aged 5 or 6.

Also, according to a recent research[42], effective reading programs are usually supported by both large classroom and school libraries. We recommend that each school should provide such facilities to their pupils.

Writing

Reading is so important for the economy because upstream of reading comes writing. Writing is the means *par excellence* for communication within any business. Written communications are distributed to inform and guide people working at different levels of the business. Incorrect or unclear information will obviously hinder communication between people, and therefore affect the quality and efficiency of the business. It has to be accepted that writing is one of the factors for the success and competitiveness of a firm. The messages conveyed must therefore have an oral and graphic linguistic vehicle which is shared and standardised.

It is interesting to note that most writing at work involves transcribing key terms and standard sentences: 42 % involves filling out prepared forms; 25 % requires recording, summarising, or using language peculiar to specific occupations or jobs; 23 % involves writing memos and letters; and only 10% is dedicated to writing academic-style reports

---

41 OECD, Information Technologies and basic learning, reading, writing, science and mathematics, Paris, 1987, p. 75

42 Elley,W.B. op. cit., pp. 42-43

and articles. Therefore, an individual's mastery of writing on the job is tied to work-related competencies.[43]

Unfortunately, various evaluation studies carried out in a large number of countries have shown that many pupils have not reached a level of written expression which would enable them to take an effective part in social life. The schoolchildren of these countries are incapable of writing to various audiences for various purposes and therefore different circumstances.[44] As the importance of writing is clearly established, a significant proportion of lesson time should be devoted to written expression. As a matter of fact, progress is linked to the possibilities of drafting and the frequency of practical exercises. And as for reading, learning how to write should be tailored to each individual, to match the requirements and competencies of each pupil. Education must enable each pupil leaving the school system to be capable of writing a structured text in which his/her ideas are clearly expressed.

Speaking and listening

As stated in the previous sections, reading and writing are essential communication tools, but it is through listening or speaking that people interact most frequently at work. The average worker spends 8.4% of his or her communication time at work writing, 13.3% reading, 23% speaking and 55% listening. The competitive standards of the new economy require effective communication skills.[45]

This is even more so because during their work, workers have to communicate constantly with a large number of individuals with whom, very often, they have no previous relationship: as a result, communication must be explicit. For instance, to ensure high quality, employees must take responsibility for finished products and services, which means that they have to be able to communicate with others upstream and downstream in the work process. In order to meet this need for oral communication, powerful intellectual, linguistic and social stimulation is necessary for this learning. This is one of the many tasks which have to be performed by schools. Throughout their school education, pupils must have the possibility of making many more oral presentations than they do today, as well as more debates, whose preparation would be required and marked.

---

43 Carnevale A.P., Skill and the new economy, in Gestion 2000, 1992, no. 4, p. 155

44 OECD, 1987, op. cit, p. 134

45 Carnevale A.P., op. cit., p. 158

Thus learning to speak well and to listen critically would permit students to prepare themselves to work in collaboration with others by developing their ability to function as a member of a team. As a conclusion of this paragraph, we support every step taken into the direction of improving the skills in reading, writing, speaking and listening.

2.2 Which curriculum ? Covering the three cultures and sports

2.2.1 The three cultures

In the turbulent, uncertain times through which society is passing, education must prepare pupils to live in a world where it is increasingly difficult to find points of reference which can be incorporated into their own lives. This simple observation confirms the approach of a sound and general basic education. People interviewed for this research regret the fact that, far too often, school systems "specialise" young people and hem them into a line of study at too early a stage, and they cannot easily change, because of the lack of crossover opportunities between these lines of study.

European pupils should be able to follow basic educational courses for the first nine/ten years of school. Only at the end of this first stage should more specific lines of study be considered. This means that the pupils can attain sufficient maturity to make certain choices in the school curriculum. During these years of basic education, we recommend the insertion of "three cultures" in the programme:

- mathematics, science and technology
- the humanities
- economics and social sciences.

Every day we are exposed to more and more technology, therefore we must all learn maths, physics and chemistry more thoroughly to understand nature and the products of man. But everybody must also get a wider education in literature, history, philosophy, social sciences, economics to understand human nature. In fact, each of these cultures draws on the past but leads to a new concept of the future. Past and future are inextricably linked in the basic personality of every European citizen.

Mathematics, sciences and technology

The great challenge in Europe is to attract a greater number of students with the skills required into courses in mathematics, science and technical subjects in basic education.

This is the only way it will be possible to guarantee in the long term a sufficiently large reserve of graduates for Europe to be able to call on the specialists it will need.

- *mathematics*

Mathematics is a key to a culture. The interest for mathematics should not be killed at an early age but its training should be promoted: mathematics should be fun for students. This training of the human mind in mathematics should enable the pupil, at the end of his/her schooling, to understand geometric and algebraic concepts, have a grasp of probability and statistics, apply mathematics to everyday situations and finally, be capable of carrying out the most basic mental and written arithmetic. Mathematics will enhance the problem-solving capacities of everybody.

- *science*

The sciences also have an essential role in the formation of the pupil's mind. Understanding the scientific culture will enable the pupil to act with success and responsibility in a society founded on science and technology, and to feel at ease in that society. Under no circumstances should the importance of sciences be under-estimated. On leaving school, society expects pupils to be capable of understanding the concepts and laws of physics, chemistry and biology, to be able to make connections between various substances and everyday life, to understand environmental considerations and have a better knowledge of themselves and the world in which they live.

- *technology*

Learning and integrating technology into basic education is one of the main challenges which Europeans' educational systems will have to face. Individuals of tomorrow will not be able to live without technology. If they are totally ignorant about it, they will merely join the caste of illiterates and will therefore be unable to play a role in the labour market. Education can no longer do without technology, which has become a high-performance teaching tool. The computer will replace the blackboard of yesteryear.

Therefore, on leaving basic education, each pupil should have a basic understanding of technologies, and feel familiar with and confident in using a computer, and be proficient in certain programs.

Humanities

Humanities is the principal field through which people acquire their values. Through having a common historical background, European citizens share values such as reason, tolerance, humanism, freedom, solidarity which give them a common cultural background. Students should understand that the achievement of these values come from both progress and retreat. This sense of history requires a lot of effort to be properly understood.

The learning of these values, transmitted via formal curricula, can only occur through a multi-disciplinary approach. To prepare tomorrow's European citizens, it will be necessary to devote more effort quite explicitly to those subjects which clearly express everything that is specific to European culture. An interdisciplinary approach to history, literature, foreign languages, sociology, anthropology, and art is called for, without overlooking morals and philosophy. Continuing attempts to compartmentalise these various disciplines only entail the risk of not helping students to gain a proper understanding of the relationship between Man and nature. Too often Man has tried to control nature, rather than trying to live in harmony with it. However, the interdisciplinary approach which is proposed should enable Europeans to become - not masters of the world, or masters or owners of nature - but to have the wisdom to make right choices.

We recommend that governments should re-structure their educational curricula with a view to "reducing knowledge aimed at a mentality of domination and control, and promulgate learning which encourages solidarity rather than individualism"[46]. That type of education allows the general education asked for by all the people interviewed.

Economics and social sciences

- political economy

At a time when political decisions and underlying will almost always have an economic dimension, and where the competitiveness of a country and the social welfare of its inhabitants are determined by the economy, democratic participation is only possible if each citizen is in a position to recognise the conditions and correlation's of economic life, to apply them to his/her personal situation, and orient his/her political activity accordingly. This is why the education of the citizen must also be the education of the economic citizen.

---

46 FONDATION ROI BAUDOUIN, L'école de demain face à un monde qui change, (Report on the cycle of seminars), Brussels, Sept.-Dec. 1991, pp. 20-21

A basic education in economics should therefore be considered a vital component of character formation, and cannot possibly start too early. It has nothing to do with a specialisation or a professional qualification.[47] It is merely a matter of gaining correct understanding and grasp of the economic world in which any citizen lives. Pupils leaving basic education should at least be able to read any daily newspaper and understand the economic situation of his/her country and the world, because the economy can now only be considered from a global viewpoint.

- environment

"The European citizens is being made increasingly aware of ecological problems connected with the economy. This observation is, however, subject to nuance. Only major catastrophes and general warnings about such things as the greenhouse effect or the risks of running out of energy cause brief bursts of interest, quickly overtaken by a preference for the comforts of modern living, whose benefits discourage any thorough examination of the risks attached. Moreover, the short-term political view, which tends to be opportunist for all kinds of reasons, and the way the subject is treated by the media, talking down to the general public, do not at all encourage a real awareness of environmental problems and the need for rational use of resources."[48]

"Nonetheless, some beliefs are already shared by all. First, the growing awareness that environmental education presupposes profound cultural innovation. If real progress can be observed in public awareness translated into political action, it should also be reflected in the education systems. After all, the education systems too are aiming to ensure that people are better informed about environmental problems, are more aware of their responsibilities, are able to react constructively and are willing to do so. It is therefore a matter of urgency to create specific forms of education relating to the environment. It is increasingly obvious that Environmental Education must be fully integrated into the school curricula, which means giving a proper place in syllabuses and in the timetable to interdisciplinary Environmental Education activities. Secondly, appropriate training for teachers is required, taking into account the special characteristics of Environmental Education."[49] Current curricula should not be burdened by the introduction of a new course on the environment, but this environmental dimension should be present in the

---

47 EURYDICE, The economy as an area of general education in the Member States of the European Community: Unit of the German Länder, Brussels, 1990, p. 4

48 Eulefeld G., Environmental Education in the Federal Republic of Germany: a survey, in European Journal of Education, vol. 26 Number 4, 1991, p. 307

49 ibid, p. 311

curriculum: among other things, in courses on geography, philosophy, science and economics.

2.2.2 Sports

The curriculum should never be reduced to only the " three cultures ". A balanced mind can only be found in a sane body. Sports are therefore extremely important in the development of a human being and should be part of the curriculum.

Sports can promote two values needed by both the economy and social life: teamwork and competition. Through team sport, pupils will learn how to collaborate and to interact with other human beings. Moreover, competition will enable pupils to reach their own limits in order to win. *We therefore recommend that the curriculum gives greater weight to team games and competitive sports.*

2.3 Which methods should be used?

2.3.1 From attractiveness to conviviality and participation

Many schools are still cold, impersonal places - both physically and psychologically. They breed alienation and apathy among students and teachers alike. Too often, the latter have to teach in poorly equipped and maintained buildings, suffering the effects of expenditure cutbacks and the legacy of an influential research tradition that was purported to show that additional resources "'make no difference" to educational outcomes. It is obvious that this is wrong. How can people actually work in buildings which are not attractive? There is definitively an influence of the attractiveness of the surroundings on the desire to learn. Buildings must invite pupils to discover the full potential of their academic career.

As will be stated in Section 5 on Adult education, it will be necessary to consider a new type of management of the school premises (schools open 24 hours a day, 7 days a week, 12 months of the year). The school of the future, in terms of infrastructure at least, cannot be restricted to its own purposes. Several "audiences" using the premises at different times of day will increase the resources which will enable new shared equipment to be acquired. In this section, the focus will be on re-discovering school as a leisure centre. Indeed, in view of the economic constraints on families today, implying that both parents have to work, school should be able to offer activities up to 6 o'clock in the evening. All extramural activities would become school activities once more. The pupils would rediscover their school as a place to relax and play.

This attractiveness would actually help to reduce student and teacher apathy. The closer ties between students and teachers in such settings result in a level of genuine caring and mutual obligation. Nobody should deny such an impact. When students and teachers feel mutually responsible to one another, they work harder on one another's behalf. Here, one can see the usefulness of pupil associations emerging. Pupils would feel more responsible for their destiny. Via these associations, they could make their wishes known, and take charge of a whole range of activities which would also make the school more attractive, thus contributing to the smooth operation of the school. When students have a say in where they attend school, they frequently develop strong ties to the schools they select; having invested in their schools, they typically identify with them. That sense of ownership, in turn, is a powerful source of motivation among students; it strengthens greatly their dedication to their studies.[50] Nobody can deny the impact of attractiveness of the premises on human relationships and on academic success.

2.3.2 Learning vs. teaching

In the near future, the teacher who can go along to a classroom, give a 'lesson', and walk out again will be a creature of the past. The teacher of the future will be a person who works collaboratively as a member of both a local team and a far wider, networked team. The system of education of tomorrow is becoming more open; there are alternatives; there is no hierarchy. Nor is knowledge itself so hierarchical. In many cases, the classroom use of the new technologies renders irrelevant, the old criteria of right and wrong answers and in their place substitutes strategies which are more or less effective, as explained in the following section. As a result, the idea of the teacher as the custodian of knowledge, and of this custody as determining the standing of the teacher, becomes somehow outdated. In future, the standing of the teacher - in the teacher's own eyes, in the eyes of colleagues and in the eyes of children - will depend not on knowledge but on the professional skills brought to bear on the learning needs of pupils.[51]

---

50 Toch T., Raising our Academic Sights, in The College Board Review, n°162, Winter 1991-92, p. 27

51 Gwyn R., Visions and Scenarios for Education and Teacher Training (programme report - internal paper), Brussels, Commission of the European Communities (FAST), 1987, pp. 78-80

2.3.3 Innovation in teaching

- Introduction

Computer technology is only present in a tiny minority of classrooms. However, schoolchildren are facing a transformation in their model of learning: from the transmission model towards an interactive model where the teacher becomes the organiser instead of the transmitter of knowledge.

The computer revolution, characterised by the use of increasingly powerful hardware, which can record, process and retrieve information, will have an increasing impact on learning methods in the next few years. This revolution may also transform the very function of the pupil, who will play a more and more active role in his/her own learning.

- The resources

According to research conducted by the British Audio-Visual Society, on average we are able to remember :

- 10% of what we read;
- 20% of what we hear;
- 30% of what we see;
- 50% of what we see and hear;
- 80% of what we say;
- 90% of what we say and do at the same time.

Interactive multimedia systems combine the known communications power of television with the flexibility and control capabilities of computers. With interactive multimedia distance learning systems, the student is actively involved in the learning process. It is a see, hear and do environment. [52] The potential of modern technologies offers the opportunity for new classroom learning methods, leading to more effective learning. New technologies will not replace teachers, they will be a third partner in what has been traditionally a bilateral relationship between teacher and pupils: the teacher will be the coach. They will introduce more flexibility in learning time and encourage self-study. They will enable each pupil to learn at his own pace, lead to a better development of the competence in solving problems, enhance curiosity and creativity of the pupils who will have to find their own way in their research.

---

52 Sherwood-Roberts P.,Vervest P., Technology Options for Multimedia in Distance Learning, Brussels, Commission of the European Communities, 1991, p. 6

Attending courses is no longer enough. Pupils must gradually learn on their own, at home, using sophisticated self-learning materials: adjustable software, which adapts to the performance of users, enables them to progress at their own pace. Various programmes are already trying to outdo each other to devise the most attractive methods, which use games, and construction of images. Likewise, networks offer new resources for learning: text and image banks, sounds, programmes which can be used immediately yet adapted locally or remotely using database access. In parallel, mailbox systems, interactive electronic mail and the possibilities of computerised fora, new highways are opening up for communication and exchanges. The appeal of networks is that to access them, a plan is needed, a determination to achieve a result, a personal and collective method for formatting and processing the information. With a researcher's motivation, it is necessary to learn to cooperate and work in a team. This is the beginnings of a promise of a extramural school, without frontiers of classes of particular ages, managed within the networks for communication and information exchange, connected through these to vast ranges of educational resources.[53]

We recommend that the European Union should finance research on " expert systems ". These systems are not yet there but will be the future means of learning within the Community. This is an investment which should be done. The future of European education is at stake.

- The role of the teacher

As just stated, the use of computers brings about a profound change in the structure of communications in the classroom, the form of tasks, the grouping of pupils, the nature of evaluation, and the arrangement of various learning activities. Therefore, new configurations for organising and managing the class need to be considered.

In decades to come, while going through implementation phases where the period of time granted to pupils for using a computer will move from a few minutes per week to one or two hours per week, then to virtually unlimited access, the role of the teacher and the nature of teaching will change. If pupils are given greater access to databases, teaching and textbooks will no longer be the main sources of empirical knowledge. New teachers will notice that their role as a guide will become more important than ever before. However, the role of the teacher ensuring that pupils have fully understood the concepts,

---

53 The Future of Teachers in the face of Technological Change (Synthesis report of research carried out for the FAST II programme), CESTA - Paris, 1987, pp. 48-49

and that they acquire a healthy sense of judgement, and a sound basis of learning, will always be there.[54]

Thanks to these new technologies, the pupil will face a mass of available data that he will have to learn how to manage. He will no longer be the owner of knowledge but the actor and manager of his own research. The pupil will be able to re-compose in his own words the results of his research, and show at the same time that he is capable of converting this data into real knowledge. A new model is emerging. We support every step taken in that direction. The pupil becomes a researcher.

This revolution will also happen at the teacher's level. The teacher will become a manager of complexity and a guide, providing his pupils with the tools necessary for the discovery of a solution and to the mastering of the technology. He will collaborate with his pupils who will become his partners in the research of knowledge. The teacher will be, first and above all, a tutor. He will not have the monopoly of knowledge any more. A new partnership is happening within the classroom. **Knowledge is no longer transmitted but shared.**

In order to make this policy working, teachers will have to be trained both in new technologies and in specific programmes. A computer-based educational system should be designed to engender continuous development in teachers and to equip them with resources with which they can be effective from the start of their careers, or with which they can be trained if they have never used such programmes.

- *Interactivity*

Teaching and learning are parts of a highly interactive process. It is unlikely that electronic communication will ever rival person-person communication in richness. Here, stimuli and responses follow each other continuously, each one acting as feedback to the other; stimulus generates response, the response becomes a stimulus for yet another response. At first sight, "distance" and "interactivity" are mutually incompatible.

However, life shows how difficult conversational dialogue can sometimes be : education research has shown, for instance, that a very significant amount of questions asked of a student in a classroom are really rhetorical questions and tend to reinforce the unidirectional speech of the teacher rather than to stimulate a real and critical mental activity from the student.

---

[54] OECD, 1987, op. cit, p. 231

High-quality didactic design is therefore essential in distance education. Books, video and audio by themselves are passive media: the user does not interact with them. Computer-based training on the other hand allows the user to interact with the material. This enables a 'conversation' to be established between the user and the system.[55] So where teaching is primarily undertaken in a non-contiguous mode, autonomous learners can still participate in occasional tutorials, and many have access to advice and guidance through local study centres. Obviously, in remote areas more use would be made of virtual rather than actual presence.[56]

In brief, interactivity may be immediate or delayed, real or virtual, direct or processed by media.

The advantages of technical innovation

- written expression[57]

Thanks to text processing programs, pupils can access knowledge bases which provide information on spelling, punctuation, grammar and style, but also factual data such as a dictionary of synonyms, models of texts and the production of documents. Texts written in this way by pupils can be easily stored, for subsequent analysis of mistakes, and to assess progress made. Computers can facilitate the work upstream of writing, and stimulate, in particular, the process of idea generation and organisation of texts. With a text processor, revision is very efficient and rewarding. With these programs, pupils produce texts that are easier to read, too; the printed version enables the text to be evaluated without the all too often negative influence of the handwriting. Finally, thanks to the function of editing the texts, it is possible to correct a text easily without marring its legibility. These various functions offered by software enable pupils gradually to gain a thorough knowledge of written expression.

However, it is not only the pupils who benefit from such a working method. In fact, computers can be useful where there are not enough teachers to devote sufficient time and provide the supervision necessary for learning how to write. Unlike teachers, computers can give an answer at any time, without disrupting the rhythm of the whole class. They

---

55 Sherwood-Roberts P.,Vervest P., op. cit., p. 6

56 Draft Report on "Information and Communications Technologies applied to Education and Training", Review Board, 1993, p. 26

57 OECD, 1987, op. cit., p. 129

can thus save time and enable teachers to concentrate on the essential aspects of written expression which are beyond the abilities of the computer.

- *teaching science*[58]

The use of the videodisk system for teaching science makes this more lively, and as a result, more fascinating. It can be used in three phases of class teaching:

* introduction of new concepts

Video images can be used to arouse the curiosity of pupils. For example, after having shown an elephant standing on a paper cup, the teacher can show the composition and breakdown of forces. Thanks to the videodisk, pupils can become familiar indirectly with the large scale experiments which are impossible in class.

* experimentation and observation

To apply the important points of an experiment and make detailed observations, the teacher can use a still image at any time in an animated sequence. The images created can easily be superimposed by computer, for example to show vectorial forces.

* consolidation and revision

Pupils can compare their predictions and explanations to those accompanying the video pictures. As the videodisk has two voice channels, the teacher can first turn off the channel where the explanation of the results is recorded, and ask the pupils to develop their own hypotheses. He can then show the same sequence again, with the explanations audible this time. So the same part of the videodisk can be used several times for different pedagogical purposes.

Science laboratories should be equipped with computers to read programs on videodisk, specially designed for teaching science. *We recommend to governments that they should draw up such programmes.*

- research[59]

---

58 ibid., p. 215

As just stated, thanks to computers, technology applicable to education now reaches way beyond computers. A broad range of hardware, software and learning programmes are already available, as well as new storage media like videodisks, storage on compact discs (CD-ROMs), new methods of data transmission like cable TV and videotex/minitel. For example, the on-line databases (encyclopaedias, thesauri and dictionaries) necessary for using these new methods of data transmission are relatively well developed.

How will these new technologies influence education? The pupil will no longer attend school to be taught, but to learn. So instead of asking pupils to memorise facts which will quickly be out of date and are already organised into textbooks, it will be more sensible to teach them how to look up texts, statistics and other information structures contained in databases, and how to analyse them critically.

Therefore, it is the very basics of teaching which are being challenged here: learning through research using new, high-performance tools made available to pupils. Thanks to technology, pupils do not need human intermediaries. All the tools needed for learning are now within reach. This technology will, and therefore must, revolutionise our education system, to prepare pupils better for entry into both economic and civil life.

- the impact on the individual

The social interaction stimulated by the use of the computer can be a powerful source of motivation, since each pupil is more directly interested in the learning of others. If they have a sufficiently broad range of teaching tools, pupils who are progressing at a different rate from the others can receive, at least in part, teaching suited to their level, even if classes contain a large number of pupils. Every European educational system must make every effort for schools to accept that each of its members should be allowed to progress at their own pace, respecting the slowest, and not discouraging the fastest through boredom which would arise due to the slowness of group learning.

Concerning the genuine integration of all social classes of society within schools, it is actually not rare to notice that children from less-favoured backgrounds, with handicaps in conventional studies, suddenly distinguish themselves in the new field of technology, where they suddenly gain a fresh start with equal opportunities. In such cases, the power

---

59 ibid, p. 29

structures could swing in their favour.[60] Equipping schools with computers is therefore a question of social justice.

Furthermore, it has been proved that the computer can give some pupils motivation where all other methods have failed. Some pupils who, for various reasons, did not want to or could not concentrate their attention for more than a few minutes on a task, without direct personal supervision, sometimes spend more than an hour programming a computer, or using it for other purposes.[61]

All this leads us to recommend to all the Member States to release the funds necessary so that, by the end of the century, all schools are fitted with computers: the target must be, in the long run, one computer per pupil!

2.3.4 Interdisciplinarity

In most European countries, general knowledge is still mostly acquired through the study of various academic subjects which are seen as goals in their own right, with little concern for interdisciplinary knowledge focusing on contemporary problems. Curricula are too academic, and schools are too slow to make their curricula relevant to a modern society.

Teaching/learning methods stress individual performance rather than teamwork, deductive learning through the application of theories rather than inductive learning through the practice of experimentation, and this is in total contradiction with the wishes of European businessmen, as they pointed out unanimously during the interviews. There is a need to study, in particular, how to teach pupils to exploit knowledge, to derive general competencies applicable to other fields; how to adapt teaching to pupils' capacity to learn; and how to improve their learning capacities.[62] But all this can only happen in a multidisciplinary approach. Therefore, excessively compartmentalised courses of study need to be despecialised, encouraging interdisciplinary courses. We repeat emphatically the recommendation which we made in Section 2.2 about the curriculum.

---

60 ibid., p. 116
61 ibid., p. 230
62 ibid., p. 42

2.4 CONTROLLING QUALITY

2.4.1 Basic prerequisites and minimum standards

According to OECD figures (1991), the majority of young people attend school until the age of 17. After that age, the figures drop dramatically: 70,6% of young people aged 17 still go to school, while at ages 18 and 19, the figures are 43,6% and 22,7% respectively. Therefore, the essential of basic education should be given to all children before they reach the age of 17. The statistics also show that the period of compulsory school attendance is vitally important.

The end of compulsory schooling should be determined, not with the "age" factor as the criterion, but much more the level of achievement of each schoolchild. This "achievement level attained", should be the absolute minimum below which no compromise should be made, and it should have been reached after completion of the third link of the Education Chain (see inside back cover). This proposal takes into account the situation in various European countries. It corresponds more or less to basic school education plus two or three years. This parameter of the "level attained" would also enable each pupil to move forward at his or her own rhythm.

To be integrated into society, society must establish a minimum curriculum which every European pupil is bound to follow. This is where the concept of "three cultures" comes into its own. It is up to each country to spread the "three cultures" to achieve this required minimum. However, although the cultural diversity of Europe is its strength, the minimum requirements should be discussed at European level. Common pre-requisites and minimum standards could but strengthen the mobility of pupils and therefore construct tomorrow's Europe.

We therefore recommend to the Education Ministers of the various Member States that they should consult each other before establishing a certain number of common criteria, with a view to establishing the prerequisites and minimum standards while leaving a certain freedom to the schools.

The European school programme should include:

- compulsory subjects to be offered by every school; this is where European consultation would prove necessary;
- compulsory subjects which any school may offer;

- non-compulsory subjects which any school must offer;
- non-compulsory subjects which any school may offer.

Such a system respects the cultural, historical and social diversities of the countries and their regions.

Then the question arises of the evaluation of this minimum standard. A European Certificate of General Education could be set up. This certificate would be awarded to all pupils leaving compulsory schooling. It would be awarded on the basis of a European examination, the same one for all the Member States. This type of examination would be made available to all European schools. The latter would have to join a European network if they want to have their pupils sitting such an examination. Schools should be free to join the network. Through this examination parents will be able to compare different schools before making a choice for their own children.

Furthermore, this standard European grade, as well as the national one, would also permit access to higher general secondary education and technical or vocational training programmes. Higher general education would teach the "three cultures", but students would be allowed to specialise in one of the three. In technical education everyone would keep the "three cultures", but students would have already begun to specialise in fields which would normally lead to finding a job. Finally, there would be initial vocational training to which an entire chapter is devoted in this report.

2.4.2 Monitoring[63]

In all European countries there is a need for information on how well the education system measures up to the goals. Everybody involved in education institutions is answerable to the public and the users of educational services for the results that are achieved.

Monitoring commonly means systematic and regular procedures for the collection of data about important aspects of education at national, regional or local levels. A monitoring activity usually involves the collection of assessment data, but is not necessarily restricted to outcome variables. A coherent approach to the monitoring of educational progress must also take account of contextual information and measures of resource inputs and the

---

63 This section is entirely inspired by:
G. de Landsheere, Le pilotage des systèmes d'éducation, Brussels, De Boeck, 1994
A.C.Tucjiman and T.N. Postlethwaite, Monitoring the standards of education, Oxford, Pergamon Press, to be published

processes of education. The monitoring can be therefore defined as the control of decision making at the macroscopic level (namely of the educational system or sub-system) or at the microscopic (namely of an institution, even of a classroom), on the basis of research findings. These findings are the outcome of a construction of meaning resulting from qualitative and quantitative information which constitute indicators. Decisions can therefore be taken in full knowledge of the ins and outs of the choices. Thus, the institution of a monitoring procedure should always be preceded by detailed reflection on the educational project, as much in the political world as in the larger civil society. It is from the outcome, always provisional, of this reflection and of the clarification of the political stakes that the proper avenues of the monitoring should be issued, writes G. de Landsheere.[64]

In many countries, different authorities already play a significant role in the determination of education policy. The setting up of a monitoring system for the evaluation of education policy can be seen as an external intervention to direct the efforts of local authorities and steer the internal operations of schools towards objectives deemed important at a national level. The functions of monitoring can take several forms, depending on the agents and their purposes[65]:

1. Accountability: enriching public discussion by reporting on the overall status and the strengths and weaknesses of education, thus encouraging the setting of education goals and performance standards.

2. Enlightenment: improving understanding of how education functions, and increasing sensitivity to the similarities and differences in the education systems of countries.

3. Decision-making: informing and improving the administration and management of education by identifying weaknesses in the system, such as the misallocation of resources, facilities and time, personnel inefficiency, and inadequate student performance; by monitoring changes over time in key variables; by providing input into reform planning and implementation; and by assessing the impact of reform efforts.

4. Advancement of science: supporting the development of theories and appropriate methods for the measurement of outcomes in multiple dimensions.

---

64 G. de Landsheere, op. cit., p. 8

65 A.C.Tucjiman and T.N. Postlethwaite, op. cit., p. 11

5. Administrative control: influencing the structures, means and ends of decision-making in the education system.

The monitoring proceeds therefore from a general attitude, from a philosophy of action: not to be content with good intentions, but always to demand verifications, as objective and systematic as possible to see whether they have effectively been followed and to what extent. In fact, states G. de Landsheere[66], it is a new "culture of the institution" which must develop. One of the conditions for the success of this monitoring resides in training teachers to prepare themselves for their new task, with evaluation at local level. This will require a global transformation of the state of mind in which the schools have so far functioned. Teachers have not always been accustomed to control systematically the efficiency of their teaching. Many monitoring systems already exist at present.

We recommend, in the perspective of a European cohesion, that the European Commission establish a monitoring system at both macroscopic and microscopic levels, so that the evaluation and the comparisons can be made at the European level. Moreover, as soon as this monitoring system is in place, we recommend that each Member State ensures that it will be implemented in their own country. It is time to be more certain about the outputs of education, and this as much for the sake of economy as for the cause of democracy.

2.4.3 Sufficient degree of freedom and autonomy

The comparison of various European school systems enables to distinguish two systems schematically: one model where the means of action and supervision of the educational action are grouped in a single centre and another where the governments restrict themselves to defining the overall frameworks for action, without intervening directly in the organisation and management of education establishments.

In decentralised systems, change is constantly initiated, modified and counter-attacked at various levels: school, the local community, the nation. It is also interesting to note that as local authorities adapt to decentralisation, certain of them turn into real decision-makers in educational matters: they define priorities, allocate resources selectively, demand external evaluation of the performance of the school system.[67]

---

66 G. de Landsheere, op. cit., p. 134

67 Duru-Bellat M., Henriot-van Zanten A., op. cit., pp. 19-20

That schools are rigid and slow to react in practice, and remain impenetrable to external demands and challenges, is most often a consequence of their centralisation, bureaucratisation and collective isolation. It would be too simple, however, to believe that the ideal solution is to be found in decentralisation. In decentralisation, other dysfunction's are possible and could create an intolerable inequality between regions within a single country. This is why we recommend the twin idea of *integration and decentralisation*, expressed and developed in the Education and Knowledge report.[68]

"The first component of this theory takes place at the central level, through the strengthening of national institutional capacities to guarantee social equity and the inclusion of all citizens in common social codes, values and capacities. The second occurs at the local level, through the decentralisation and increased autonomy of institutions to enable them to implement educational programmes with greater relevance, accountability and effectiveness in allocating resources.

At the institutional level, the proposed strategy entails a reorganisation of education administration, directed towards decentralising and increasing the autonomy of schools and other educational institutions on the one hand, and integrating them into a common framework of tactical objectives on the other, since such integration is the only means by which education can help fortify the cohesion of increasingly fragmented societies. This autonomy implies that educational institutions should be integrated into the local and regional environment and should function within the functions thereof, without being confined by them. Education must always look beyond the local and temporal horizon. In addition, the administrative hierarchy must be as close as possible to the local level of the school, and the right of teachers to participate in the administration must be recognised.

Genuine decentralisation, therefore, means autonomy, a "project" mentality, institutional identity, initiative and management capacity rooted in the educational institutions themselves. These factors, though essential, are not an end in themselves, but only preconditions for the integration and adaptation of educational institutions to the larger environment. This process can be described from a dual perspective: first, as a shift of institutional administrative responsibilities from top to bottom until they rest with the individual educational units, which thereby acquire the autonomy to innovate and to adapt themselves to their environments; and second, as a shift from centralised bureaucratic control of institutions to evaluation methods based on results, which will, in turn, give the educational units an incentive to take responsibility for their own institutional agenda and

---

68 ECLAC-UNESCO, 1992, op. cit., pp. 122-128

for effective management of their human support and financial resources. In sum, its goal is to give institutions the autonomy to create, to innovate and to improve their quality."

We therefore recommend to all European governments to reflect on their education systems in terms of decentralisation and integration, because this system appears to respond best to the requirements for a society undergoing radical change.

2.5 Teachers

2.5.1 The malaise

The situation observed

In many Western countries, teachers as a specific professional community are in crisis. There is a crisis of confidence between them and civil society. They are experiencing a feeling of impotence when facing the invasion of the media, a feeling of failure when they see the severe blow being dealt to classical culture, a feel that there is a mismatch between the practice of their profession and the reality in society. Finally, the loss of prestige of the public services is taking away what remains of their image. They feel forsaken (like the other professions in the non-market sector) and isolated. In short, teachers feel that their profession is losing its power and social status.

A few reasons explaining this situation

First, they are uncomfortable about the role given to education in the operation of the economy. The reason seems to lie in their lack of social and political training, which quite simply prevents them from being able to position themselves appropriately amid the conflicts concerning them. One solution to this crisis would therefore involve a greater awareness of the economic, social and political context of education.[69]

Second, parents are more highly educated than ever before. One result of this is that their expectations for their children's education are higher than ever. Extensive parental experience of the education system through their own schooling also precludes a return to the closed world of the school room where the teacher's word went unchallenged. The teachers are now paying the price for the democratisation of education of yesteryear.

---

69 Fourez G., op. cit., p. 125

Third, the assumption of new responsibilities due to a world in transformation, rarely replaces existing responsibilities. Rather they are simply added to existing responsibilities which, while largely taken for granted by the public, still have to be carried out by the teacher.

Fourth, it is commonly asserted that the rewards and status of teachers decline in direct proportion to the growing number and predominant place of women among their ranks.[70] That assertion springs from diametrically opposite viewpoints: the opinion that such an inverse correlation is a normal, even natural, labour market mechanism, on one side, or conversely, "women's work" tends to be systematically undervalued. Whether or not the profession can accurately be said to have become "feminised", teaching is an occupation that employs very many women in all EU countries. The share of teaching posts held by women varies markedly from the pre-primary and primary levels to the different sectors of primary education, as it does across countries. Primary school teaching is a feminised job. Typically, 7 or 8 out of every 10 primary school teachers are women. In Italy, the proportion comes close to 9 out of every 10. In turning to teachers in secondary education, the situation becomes more complex and the label "feminised" is sometimes inappropriate, especially at the upper secondary level.

These four reasons are, of course, only the tip of the iceberg of the malaise, and in the following sections, we shall attempt to look in greater depth at some of the factors which explain the crisis among teachers, and we shall attempt to provide some of the solutions.

2.5.2 Enhancing their status

Profile of the aspiring teacher

It is regrettable to observe that even today in certain European countries, the teaching profession is only embarked upon by default rather than by vocation. In these countries it is the least able students who turn to teacher training. For example, in France it can be seen that very often, a teaching career is chosen out of resignation. Unfortunately, the same phenomenon can be seen in Belgium, where almost all the students in a college of education will have attempted university courses unsuccessfully: career choice by failure is certainly not the best way.[71]

Some selection seems therefore necessary. The selection process for teacher education enables control of the quantity and quality of the group of people who go on to become

---

70 OECD, The Teacher Today, Paris, 1990, pp. 28-33

teachers and to work as teachers in the schools. Through this process, people who are thus empowered may pick out those whom they believe will be good teachers, and far from the teaching profession those whom they believe are not fit for the job.

We emphasise the fact that we are not recommending a numerus clausus in any form whatever. We are merely asking that candidate selection procedures should be set up, because in practice there are hardly any failures in a college of education.

Enhancement of status through pay

To restore teaching careers to their former glory, it is urgent to review the pay policy for this profession. It is appalling to note the average of teachers' annual earnings tends to rise until their early 40s and then stops or dramatically slops. In two Member States, Belgium and Italy, maximum earning levels are reached at the age of 46.[72]

The level of financial rewards constitutes one of the essential aspects, of the overall attractiveness of any occupation. This applies more than ever in today's cost-conscious societies, typified by growth in social aspirations and in consumer expectations. This concerns not only average levels of pay, but also how salaries are distributed and structured over the length of the career. In most countries there are incremental scales for teachers' salaries, so that teachers earn more as they grow older, irrespective of the quality of their teaching or additional qualifications achieved. This might be inevitable to some extent, but the automatic incremental increases should be accompanied by other means of gaining promotion or other salary-related recognition.

How can one really expect to make such a profession attractive and stimulating for the individual, if there is no provision for rewarding teachers who are really committed to their profession ? That is absurd. It is time that the quality of teaching is rewarded by a pay increase. In Europe, on average, 80% of the national budget is used to pay teachers' salaries. This is partly due to the excessive ratio of teachers to pupils. As the budget of the national education systems cannot be drastically increased, pay increases should then be accompanied by a promotion in status. Of course, below a certain minimum salary offer, it would be almost impossible to find a teacher to employ.

---

71 OECD, 1987, op. cit., p. 63

72 Neave G., The Teaching Nation - Prospects for teachers in the European Community, Oxford, Pergamon Press, 1992, p. 97

Enhancing teachers' careers

Eight Member States accord civil servant status to teachers: Denmark, Germany, Spain, Greece, France, Italy, Luxembourg and Portugal.[73] The vast majority of teachers throughout the Community enjoy permanent appointments regardless of the needs of education and even worse, sometimes regardless of their competence. A change of conditions of employment appears necessary. The single status of teacher is not necessarily good for the quality of education. The states should make the profession more attractive by setting up a career structure. The teacher could start out with the title of teacher, and move up the scale to reach the title of Master of Teaching. At each stage, of course, there would be rewards in terms of pay. The career of a teacher could then be seen in this way: the teacher moves up from one stage to the next if he/she passes a test consisting of an examination of knowledge of the subject taught, continuing training lasting at least 15 days a year and connected with the educational field, as well as a positive assessment of teaching quality.

2.5.3 Improving teacher training

Aiming at a university training

Until now, it has been stressed that school must be linked to society, with a view to preparing tomorrow's citizens properly for a world undergoing radical change. The basic training of the future school teacher must therefore include the acquisition of the "three cultures". If teachers are supposed to prepare young people for a certain type of society, they must have a good knowledge of that society. It seems to us that one of the places *par excellence* for research and understanding of our society is the university.

It is therefore regrettable to observe that in certain European countries teacher training is not carried out in universities, but in colleges of education whose only function is to train teachers. How can pedagogical research, to take but one example, be separated from teacher training ? This demarcation is even more apparent since there is very little contact between university research centres and teacher training colleges. Two parallel worlds which never rub shoulders! Moreover, the number of years teachers have spent acquiring their education has a real influence on the learning process of the pupils, e.g. the longer a teacher trains, the better the results shown in the reading ability of their students.[74]

---

73 Le Métais J., Teacher Mobility in the European Community: Recruitment and Management Issues, Brussels, Eurydice, 1991, p.4

74 Elley W.B., op. cit., p. 42 and p. 49

How can one hope to have a high quality of basic education, if quality is not a prime objective of teacher training? Moreover, a measure intended to improve the quality of teacher education may also increase the degree of cross-transferral or 'permeability' into other areas or fields of study.

This university training would also facilitate exchanges between European students. It would be quite possible to envisage aspiring foreign language secondary school teachers spending at least one year of their university course in the country where that language is spoken. Language courses would be more lively, because the teacher would have a better knowledge of the culture of the country where that language is spoken, merely by the fact of having lived there.

We recommend to the European governments that they should integrate teacher training, at all levels from nursery to tertiary secondary education, into university courses. The role currently assigned to teacher training colleges could be transferred to the Education Science Faculties of each university. For countries which have not already established this, there would be a substantial link between research and teaching of pedagogical methods and more courses concerning quite specific subjects which teachers will have to teach during their career. Strengthening the training of teachers and placing them at university level will enable the profession to restore its standing.

Practical initial training

What we are recommending already exists in some European countries. For instance, in Germany, all teachers are higher education graduates who have taken a 3-4 year degree course, followed by 18 months to 2 years of practical training.[75] It is clear that training of aspiring teachers cannot only be intellectual. Some intellectually brilliant people may make mediocre teachers. However, for this message to get through, pedagogy has a very important role to play. The teacher's certificate should only be awarded if the student has shown sufficient aptitude during the practical training in school. Practical training, as such, is obviously not enough, but it complements the intellectual training. A student recognised as having the ability to teach should have obtained the necessary scores both in intellectual and practical training. University needs to adapt, to set up a structure of practical training, as well as its evaluation by teachers in pedagogics.

---

75 Boreland-Viñas H., Teacher Mobility in the European Community: Initial Teacher Training, Brussels, Eurydice, 1991, p.5

Retraining and further training

One cannot hope to achieve anything significant and permanent in education without a motivated, highly-trained teaching profession. To reach such a target, the teacher must accept constant retraining. Sustained training efforts must be aimed at teachers not sufficiently open to the idea of continuing training, as if transmission of knowledge occurred by intuition.

Unfortunately, many teachers find little motivation to attend courses to increase their skills; and this is perfectly understandable, since there is no financial incentive for them to train while working; this training is carried out on a more or less voluntary basis. Therefore, financial incentives should be awarded to teachers who make the effort to undergo training.

In practice, how can such ongoing training be achieved? *We recommend, first of all, setting up sabbatical years for setting off to discover the labour market outside. In addition to this sabbatical year, one-off training courses of 15 days could be taken during the summer holidays. This would avoid having to search for replacements during the year, and would thus reduce the cost of ongoing training. The content of these two weeks of seminar would be subject to discussion, depending on the requirements of the school within its region.*

We also recommend that initial training should no longer entitle teachers to lifelong professional tenure, but should have a specific maximum duration, after which it would expire, unless renewed by a minimum number of in-service courses taken and passed. In this way, education can live in harmony with a constantly changing society.

2.5.4 Appraisal of teachers

Quality and competent teaching should be rewarded, although it is notoriously difficult to achieve methods of teacher appraisal which are both fair and acceptable to the profession. One way of solving this problem is to propose that teachers be appraised by their peers. In turn, teachers who have received a positive appraisal might find themselves as "appraisers" for a specified period.

Appraisal seems very important to use, particularly as once teachers are ensconced in a classroom with pupils, they can do more or less what they want, without being accountable to anyone, provided they comply with curricula and official instructions. This appraisal should be taken seriously by teachers, because in the event of repeated failure, the teacher could, after being warned, be banished from the classroom and even from the

school system if it appears that he or she is completely unsuited to the school structure as it changes with the times.

2.5.5 More active support from the local business community and parents

"Teachers and industrialists often used to glare defiantly at each other. While the former saw industrialists as exploiters of labour, shameless beneficiaries of the iron law of wages and social inequality, the latter did not mince words when describing everyone in the education system as a bunch of do-gooders, envious, with no idea of economic realities, and closer to Marx than Ford or Taylor. People do not react in the same way if you are experiencing the world "intellectually", in an idealistic manner, without risk of losing your job, in an administration whose main characteristic is not a sense of adventure, or if you are in a company, where your job is on the line every day. Different language and values gouge a wide, deep cultural abyss between these two worlds."[76]

This mutual attitude leads to teachers being unable to comprehend the economic environment, and thus they do not understand the requirements of industry. A partnership would be the ideal opportunity to broaden the horizons of the teacher who has spent all his life in schools, first as a pupil, then as a trainee teacher, and then as a teacher. Spending one year facing the technical, social, cultural and professional realities of other economic actors could contribute to making school more permeable and more attentive to the outside world, and this could even happen abroad.[77] This continuing training must therefore incorporate the twofold trend of providing regional roots while being open to the world, inter-cultural pedagogical practice and teamwork and an interdisciplinary approach.

We therefore recommend that work periods in industrial companies should be organised for teachers because this is also the best way to make sure that skill requirements of companies are catered for in actual classroom practice. It is therefore suggested that companies enter into contractual agreements with schools to welcome teachers for short periods of training and/or retraining.[78]

"This partnership could also be found in the concept of "open professionalism" which enshrines the idea that the modern teacher, at the focal point of rapidly changing and

---

76 Lemoine M., Mariage d'amour ou mariage de raison?, in Autrement, Paris, n°118, January 1991, p. 17

77 Andrieu J., Rapport pour le Conseil Economique et Social, Perspectives d'Evolution des Rapports de l'Ecole et du Monde Economique face à la Nouvelle Révolution Industrielle, Paris, 1987, p. 132

78 Kairamo K, Education for life, a European Strategy, London, Butterworths, 1989, p. 64

highly demanding educational policies, needs to be both open to communal influence and cooperation - with colleagues, the school, ongoing research and development, parents, the community - and to receive respect as an individual professional. Reconciling these two elements in practice may not, however, be straightforward. It would entail an openness to outside influence that enhances, not diminishes, the individual's sense of commitment and responsibility."[79] In order to enhance such partnership and to make it successful, each school should appoint a mediator who will favour all the possible collaborations and who could also be a link between teachers, pupils and parents in case there are some problems of communication.

2.5.6 Conclusions

We assert that education should be transformed into a socially valued profession, adequately paid and organised on the basis of merit, requirements and performance. Therefore recruitment, working conditions and training of teachers, as well as their status, incentives and career prospects, all need urgently to be re-examined.

2.6 SPECIFIC ISSUES

2.6.1 Failure at school

Introduction

"Public attention has rightly shifted to student achievement, with a rising concern for repeaters, late starters and slow learners. The presence of so-called "residual" groups of low-achievers and early drop-outs are the most challenging problems faced by education authorities in all European countries".[80]

There does not seem to be any European policy on repeating a school year, especially when you look at the UNESCO statistics (1988 figures). Denmark and the United Kingdom show a 0% repeat rate in primary school; Italy, Greece: 1.3%; Germany: 1.9%; Netherlands: 2.4%; Luxembourg: 6.1%; Spain: 6.9%; France: 9.2%; Portugal: 16.6%; Belgium: 19%. [81]. The problem of failure at school seems to have been attacked in different ways in Europe. The inequality between European pupils is far too great.

---

79 OECD, 1990, op. cit., p. 44

80 Kairamo K., op.cit., p. 39

81 L'Education, Le Soir, Brussels, October 1993, p. 13

We call on the Member States to consult each other, with a view to adopting a common policy on failure or success at school. Failures should remain the exception and not the rule, as seems to be the case in certain countries.

Social accreditation

In a context of modernisation and economic recession, and therefore more intensive competition between individuals, their chances of getting a job and integrating into society increasingly depend on their level of academic attainment.[82]

A basic change has occurred in our society. In the 19th century the social status of a family's children did not change from generation to generation, whether or not they were successful at school. This now is no longer the case.

The liberal capitalist system fits in well with greater social mobility: after all, modern factories today require engineers and skilled workers, and it is not necessary for them to come from socially privileged families. What is essential for European economy is the handing down of jobs and social relationships from one generation to another on a broader basis, avoiding that social class and status from parents is transmitted to children. The legitimisation of social status therefore depends on the acquisition of competencies which school should provide. This is the context in which failure at school becomes a veritable social problem.

Reasons for and consequences of failure at school

What causes a drop in achievement level, and therefore failure at school, is the judgement of today through yesterday's eyes; it is the use of an assessment system which is unsuited to measure the acquisition of competencies whose very relevance is no longer certain. How can one hope to have a suitable system of evaluation while continuing training is still not an integral part of the teacher's career? What is the point of sending someone back to the starting line because they did not clear the first hurdle, and then only offering them a further attempt at the hurdle, without trying to understand the personal and cultural reasons for this failure? The teacher forgets all about it and starts again, without asking any questions about the teaching, because the rest of the class got through. Such a system deserves to be criticised.

---

82 TASK-FORCE Human Resources, 1992, op. cit., p. II

Repeating a year is experienced by the child as a signal of regression, a break with the mimetic desire to acquire and grasp knowledge. Therefore, can one not subscribe to the view expressed by C. Seibel, when he wrote: "The first obstacles which were not overcome properly or rewarded lead to a child with learning difficulties having negative consequences which are not only emotional or psychological but also pedagogical".[83] In order to denounce such a process, C. Dweck proposes the concept of learned helplessness. This American researcher, according to Eurydice's study[84], "demonstrated that repeating the year implies a negative assessment which affects the individual. The damage is all the more serious when the pupil's teachers, parents, and classmates attribute educational problems to intellectual ability, holding the view that intelligence is innate. In short, the child learns to interpret difficulties not as obstacles to be overcome but as the very proof of lack of ability. This process ends in fatalism and resignation".

The Member States which have this policy of repeating should ask themselves a few questions, because the mechanisms of school selection through failure involve a tremendous waste of talent and do not seem to be the most efficient systems according to international standards. For instance, the Scandinavian countries and Japan, which have abolished the practice of repeating the year, generally have results which are above the international average. Close examination of the studies published by the IEA (International Association for the Evaluation of Educational Achievement) indicates that it is impossible to establish any absolute connection between automatic promotion and the effectiveness of the education system. If, for instance, the last international study on the reading skills of pupils aged 9 and 14 is taken, the most successful countries include most of those which have opted for automatic promotion (Finland, Sweden, etc.) as well as some which authorise repeating at the end of every year (Switzerland). The results of these international comparisons do, however, refute the claim that high rates of failure at school would be the price to pay for a quality education.[85] Therefore, the policy of systematic failure is an illusion and a scandal which should be stopped at all costs.

Preventing failure at school

We re-state the principle that teachers must consider repeating a year as abnormal. They should start from the viewpoint that, apart from mental disabilities, any child can succeed in education without encountering failure or falling behind the other pupils. This idea, and

---

83 Andrieu J. , op. cit., p. 62

84 EURYDICE, Measures to combat failure at school: a challenge for the construction of Europe, Brussels, Commission of the European Communities, 1994, p. 93

85 ibid., p. 93

the possibility of realising it in practice, should be drummed into teachers during their initial and continuing training, in view of pedagogical discoveries.

The usual systems of evaluation must also be reconsidered as a matter of the greatest urgency. "It is vital that this evaluation should be a carefully planned combination of formative (continuous) assessment and summative (terminal) judgements. A significant aspect of formative evaluation is its diagnostic function. It is essential not only to identify what a student does not understand, but also to attempt to discover the source of the misunderstanding so that it can be remedied. Although crucial in any endeavour to improve the quality of teaching and learning, the diagnostic role of the teacher is often neglected to a surprising extent in curriculum planning." [86]

As the Eurydice research shows, the reliability and validity of the marks given to the pupils have been called into question by many investigators. Studies have compared the marks given by teachers to pupils in their respective classes and the marks obtained by these same pupils in external standardised tests, and have found a wide discrepancy between them. Even if teachers correctly assess the pupils in their own classes, their standard of marking - and the achievement levels of pupils in their classes may differ widely from the standards of other classes. Teachers also tend to overestimate the differences in ability between the pupils in their class. Pupils ranked "good" in one class may be ranked "poor" in another class and vice-versa. Pupils of above average level according to national levels may be ranked as "failed" simply because they are the weakest pupil in their class.[87] Such a ranking system does not invite the pupil to reach for the maximum of which he is capable, but rather to rank higher than his neighbour. Thus the results of a whole class lie along a predictable probability curve.

To respect the pace and style of learning of each pupil, it is deemed preferable to measure the competencies actually acquired by the pupil, rather than his/her position in relation to the rest of the class. Each pupil should be given the time necessary to go through the entire learning process. It is obvious that this type of evaluation suggests specific, individualised teaching methods and tools, such as modules, capitalisable units and individual competency reports.

In other words, no further demand should be made of pupils to all move forward together, at the same pace, in all areas, in order to all reach the same point at the same time. The " level attained " is a key in this system. Allowing this personal development

---

86 OECD, Schools and Quality, Paris, 1989, p. 63

of the pupil can only occur in small groups, in any case certainly at the start of the school career.

A good mutual understanding and a close cooperation between school and the pupil's family are among the most important components of any strategy to overcome failure at school. Indeed, it is of vital importance that a family should be able to provide psychological and emotional support to the child during schooling, and particularly when the child is having problems. [88] Partnership must really become the keystone of the school system.

2.6.2 Television

Introduction

New generations have been brought up since their earliest years in front of the television, so they do not feel the fascination experienced by earlier audiences. It has been observed that children are now watching less television than 15 years ago. They like to play and enjoy sports. For them, television appears to be one leisure activity among many. A worrying leisure activity, when one considers the amount of time that they spend in front of the box. The European average is two and a quarter hours per day. Taking the French statistics as an example: a primary school child spends an average of 850 hours per year at school, and 790 hours watching TV. A secondary school pupil spends 960 hours at school, and 930 watching TV.[89] This is a danger to the child's behaviour. Children risk behaving in the same way in class as they do when watching television. Research has shown that the constantly changing rhythm of TV means that a pupil no longer has a sustained attention span: he zaps his teacher after a very short time!

Due to the very way it operates, the knowledge it conveys is a disorganised, incoherent knowledge, a patchwork of information, not subject to any rules, where everything is mixed together. Especially as it emphasises events, the spectacular, and treats insignificant matters in exactly the same way as serious ones. This, combined with the speed with which the pictures change, each one erasing the memory of the previous one, creates a disordered wave in which reality is constantly jumbled up with fiction. In this moving world, the final outcome is sometimes total confusion. The school is confronted with a partner of some stature, and the question arises of how it is to deal with such unfair competition.

---

87 EURYDICE, 1994, op. cit., p. 56

88 TASK-FORCE Human Resources, 1992, op. cit., p. VI

89 Le Monde de l'Education, no. 205, June 1993, p. 41

A new culture

"Every five year-old knows how to use a remote control, or load a video or audio cassette. Every 11 year-old knows how to "zap", and watch simultaneously on three, five or eight different TV channels, three, five or eight programmes, series or films (while at the same time reading a cartoon strip!), and at the end of this perilous and unlikely intellectual exercise still be able to reconstruct the spirit, tone and actions of all of them."[90]

This is what now constitutes the basic material of the "real" culture of the modern world, this "new culture" sits uneasily with "Culture", it pushes it around and overturns the notions of universality, durability and eternity which are associated with it, to put in its place the accelerated "turn-over" of the values of fashion, the ephemeral, the event, things of interest to small cliques and groups. We have entered the era of immediacy. By so doing, the new culture has consigned "Culture" to the ranks of fossils.[91] Our civilisation is therefore a civilisation of the written word in head-on clash with the revolution of images and media. How to integrate this new culture into school curricula, particularly as it encourages passiveness, even at an intellectual level?

Pupils should be given the opportunity, in an educational framework, to watch again on video, a TV programme they have watched recently, to think about it, and express their thoughts. This seems a useful possible starting point for a process of training in understanding the communication medium. Understanding television in this case is not a problem for experts or researchers, but becomes important for everyone, in the context of their daily lives. This type of critical training is even more important because TV provides the content, but cannot provide the structuring and symbolic function, since it operates like a supermarket shelf: everything is there, at hand's reach, but only a human relationship, the presence of another person can allow a symbolising function.

It is up to school to take charge of "education for television". As stated, one can analyse reports to decrypt the message conveyed. Pupils need to be taught to think about what they see with a certain detachment. They should be asked to analyse the content, the form, the intentions of the author as well as the producer. In this way, they can develop a critical mind. The purpose of these television courses is to enable pupils to have a real ability to take a detached view of what they see, and successfully form their own judgement through the mastering of the TV language and its own rhetoric. Thanks to this education

---

90 B. Barchechath (ed.), The Future of Teachers in the face of Technological Change (Synthesis report of research carried out for the FAST II programme), Paris, CESTA, 1987, p. 25

91 ibid., p. 26

for television, the pupil becomes an active TV-watcher. As a result, pupils should be able to watch television more critically and more intelligently.

Cultural levelling

This learning how to take a detached view of television programmes becomes more important when one considers that research has shown the importance of social interactions as a factor of influence. The message has a far greater chance of getting across if it is taken up in discussion within the family, at school or in peer groups where the influence of esteemed and acknowledged opinion-leaders can be heard. While children are often alone in front of the TV, they are never alone in receiving the message of television. This becomes a source of shared culture, a children's culture. It is the source of a knowledge which they have and adults do not. This TV culture enables children to position themselves within a group. They are in a group that either likes a programme, or take the opposite view. Anyone who does not share that culture may find themselves excluded because they do not share the values of the community. A child deprived of television then experiences marginalisation.[92]

In the long term, the media have a more profound and pervasive impact, which consists of reproducing and strengthening a consensus of the image of society. The international standardisation of the content of programmes, linked to the formation of worldwide media conglomerates, has intensified the feeling that there is a danger of culture being reduced to the same level across the planet, and increased control over society.[93] We can illustrate this observation with the example of television news. Never have young people of all social groups had the opportunity to be so well informed - and their parents too, of course. But in fact, they have never been so badly informed. Flashes, impact, quantity instead of quality. Television, whether consciously or not, is principally cultivating the art of arousing easy emotion, leaving in-depth, relevant analysis to specialised programmes which are often broadcast very late.

There is no attempt to inform the viewers better, to "educate" them, but they are expected to go along at the same rhythm, "for" or "against" rather than "about". This is more alarming because nowadays, over 80% of individuals receive their news from the mass media, and nearly 65% of them rely solely on TV for news. Schools should enable pupils to look at a newspaper, news magazine, and recorded television news, and to learn to form their own judgement on the event. It is because they understand events that schoolchildren will be able to take on the role of responsible citizens.

---

92 Le Monde de l'Education, op.cit., p. 43

93 Les transformations du contexte socio-culturel et normatif de l'école, op. cit., p. 14

Violence

This section on the influence of television cannot be concluded without mentioning and denouncing one of its effects, which is probably the most perverse for our society, namely violence. To understand the impact of television violence, "several components are combined:

- the physiological component: increasing desensitisation to scenes of violence, and desire for even stronger stimuli. Violence is experienced as an object of desire or even pleasure;
- the emotional component: the habit of seeing extremely powerful images, and gradual dulling of the reactions to the spectacle of pain;
- the cognitive component: development of an image of the world which is powerfully affected by violence, and which results on the one hand in a tendency to over-estimate the probability of becoming a victim of an act of violence, and on the other hand to consider the use of aggression as a legitimate and normal way of resolving conflicts.

Television violence is even more perverse, because films and series place particular emphasis on the hedonistic aspect. The violence is presented as action, as a tried and tested means of achieving objectives. Pain is not really shown, and when it is, it is usually in a form close to voyeurism.

It is frightening to note that in 1991 on all channels in Europe combined there were approximately 5 scenes of violence per hour and scenes ranging from extreme violence to murder were regularly shown on the screen. If an international comparison is made, it is certain that Japan and the United States, where scenes of violence appear 8 to 10 times per hour, and where a constant rise in violence has been recorded in recent years, are far above the European average."[94] Research shows that from the age of seven or eight, the impact of TV images, whether violent or not, varies from one child to another. Everything depends on their social, cultural and family background.[95] *We recommend that, either at European level, or at national level, governments will set up ethical committees to look at television and prevent violence being rendered banal. The fate of European democracy is at stake.*

---

94 Grobel J., Violence and the media, in The Bulletin, vol. 10, n° 2, June 1993, Düsseldorf, European Communication Institute, p. 3

95 Le Monde de l'Education, op.cit., p. 42

2.6.3 Foreign students

Problems at school connected with immigration

The integration of foreigners in a country is important for the social consensus. Education has also a role to play here. The quality of education of non-natives is therefore essential and special efforts have to be made to integrate them into the host country.

The large number of academic failures among immigrant populations is due, in the opinion of some researchers, to a lack of recognition of their culture.[96] According to these theorists, courses should be given in the language of the foreign pupils. However, this theory seems to be difficult to validate by empirical research and difficult to accept from the conceptual viewpoint. When one attempts to isolate a specific effect of the nationality (with the underlying problems of communication or "cultural heritage"), the results are hardly conclusive. For example, if one compares success in primary school (derived from figures for access to the 6th year at the usual age) for pupils from families of less-favoured social categories, of four children and over, and where the mother does not work outside the home, the statistics concerning French and foreign pupils are very close, and actually are in favour of the foreigners (30.8% and 35.2%). In other words, all things being equal, the nationality of the pupil does not seem to have an effect on success at school.[97]

We therefore recommend the setting up of compensatory programmes for children arriving from other countries in the following subjects: common language of the school and culture of the host country. These programmes should enable foreign pupils to integrate among their native peers.

Multiculturalism

By multiculturalism is meant the "objective" situation of a country in which groups of various ethnic or geographical origins co-exist, speaking different languages, but may not share the same religious beliefs or the same values of ways of life. At European level, one could quite easily consider a European multicultural school, once the Member States reach a decision to cooperate on drawing up school curricula and minimum requirements.

However, it is illusory to expect all foreigners to integrate by means of assimilation. This is only accessible to those who are able individually to carry out successful integration thanks to a practical understanding of the economic and social rules of the game prevailing

---

96 FONDATION ROI BAUDOUIN, 1991, p. 28

in the Western European society. For the others, who are more in a position of being on the defensive, integration involves collective integration; it is the ethnic community that negotiates, through its representatives, its recognition by the host society.[98] *Therefore, in addition to the compensatory programmes, we recommend some partnership between schools, the family, and on this precise point, the representatives of the ethnic community. This type of partnership will build a bridge between the school on the one hand, the culture and the family on the other hand. This is part of a pluralist perspective which esteems the specific features of each culture for their true worth.*

---

[97] Duru-Bellat M., Henriot-van Zanten A., op.cit., p. 33

[98] Les transformations du contexte socio-culturelle et normatif de l'école, op. cit., p. 22

CONCLUSIONS

European education, which must educate "skilled generalists", is therefore built on national foundations with very different ideologies, and that is what gives it its richness. European reserves of grey matter constitute an essential resource, in the same way as energy or raw materials. Basic education is therefore the prime responsibility of all the parties concerned: family, government, schools and business. It is only if all of these cooperate that it can be developed and improved. Partnership is therefore the keystone of the educational system of next century as the following box shows.

> Education defies the laws of economic measurement: it is an art and not an industry: "one does not manufacture a student in the same way as a product" ...
>
> Concerning civic and moral values, their transmission does not operate through the oral or written word but through the example, the imitation of admirable behaviour.
>
> (Jacques Danzin)

3. BALANCING GENERAL AND VOCATIONAL EDUCATION

3.1 General Education (the final 2-3 years at school)

Having learned the fundamentals of the "three cultures" in basic school education, pupils may now start to specialise in one of them, however without dropping all classes in the other two disciplines. During these final years at school, studies should be directed into the art of debate, enhanced problem-solving, and should provide initiation into the learning of specific skills and proficiency in other languages.

The ability to lead a successful active life, and to secure immediately either a good job or a place at a tertiary education institute of choice, will depend on some additional skills: team-work, decision-making and analytical skills, loyalty, service to the community, and willingness to take risks and accept personal responsibility. All those skills should be provided by General Education.

3.2 Vocational Education

3.2.1 Improve the prestige

As we remarked in Part I, we are experiencing a revolution from an industrial world based on labour to an industrial world based on knowledge. For this revolution to occur gently, the providers of vocational education must regain their confidence and social and professional esteem, since in a certain number of European countries vocational education has generally been regarded with a certain suspicion.

To improve its prestige, Human Resource managers should be willing to promote more people with a vocational education background and certainly pay them according to their technical level recognised as important for the company. Also, a real and fruitful partnership should be set up between vocational education schools, industry and social partners to meet the requirements of the profession.

Finally, to avoid vocational education from being snubbed, crossovers with general education should be established, as has already been done in some European countries. Thanks to crossovers, any pupil can change from one system to another, which means

that everybody will have to recognise the high standard of vocational education and above all that nobody considers it as a second-best training course for students rejected by the general system. Vocational education courses would then be held in high esteem. Furthermore, no pupil will never feel trapped in a particular course of study. Crossovers allow a school child to climb up a ladder while, if they did not exist, the schoolchild would be launched into orbit, from which he could not escape.

3.2.2 The requirements of industry

Introduction.

Despite the economic recession and unemployment, company executives continue to complain that they cannot find the qualified young people they need. Very often, this is because education structures are not suited for the qualification required. To overcome this deficiency, they would like the education systems in the various European countries to analyse job profiles, in order to ascertain which qualifications are accessible after initial training, and which require professional experience.

"The socio-economic context of the 1990s and subsequent decades will be profoundly marked by the growing role of what can be described as "intangible capital", i.e. not only vocational qualifications and technological competencies but also organisational capacities and entrepreneurial culture. European "human capital" has thus become a force for creativity and dynamism in the Community, and must be seen as a shared resource which must be developed by mobility, exchanges and co-operation."[99] It is because the European economy relies on its human capital that vocational education is a powerful agent for transforming our society.

Wide-ranging competencies

Modern business management is characterised by more decentralised decision-making powers and organisational structures. Each level of the organisation now has its own share of decisions to make. The modern firm is, guided by the idea that employees are able to plan, arrange and carry out their work autonomously and even, to supervise their own work. This means that there is a growing requirement for multiple or intermeshing qualifications, i.e. combining information technologies with traditional qualifications to be able to adapt to new working situations. This required flexibility can only be achieved if vocational education leaves a major role for basic education.

---

[99] TASK-FORCE Human Resources, Memorandum on Vocational Training in the European Communities for the 1990s, Brussels, Commission of the European Communities, p. 7

Employers therefore expect their employees to make a contribution which is increasingly changing. The individual's contribution is becoming vital for increasing productivity, efficiency, quality and service. The education and training that employees will need will have to be broader, and encourage competence in a wider context of work rather than a narrow technical understanding of their job.[100] The competency required must enable them to adapt, to manage various roles, comply with standards, be creative and respond to changing requirements flexibly.

Age and level of entry into vocational training

The vast majority of industrialists interviewed wanted vocational training not to start too early, because the mind is not yet structured, and there would be a risk of educating technicians with only a few limited competencies. This kind of education will not enable the pupils to be flexible. It would also turn the vocational education system into the dustbin of the school system and it has to be avoided at all costs.

To remain consistent with the idea of the Education Chain in Europe, vocational education would have to start after school children had completed their basic education, i.e. at the age of 15 or 16.

3.2.3 Diversity of European systems

The harmonisation of education systems in Europe is emphatically not sought by Member States, as this would be counterproductive to building the Community. Indeed, the diversity of systems, and the diversity of cultures which they reflect, form an asset which should be preserved and enhanced for European construction.

The diversity of vocational education systems in Europe allows them to be in direct competition with each other. Qualifications obtained in one Member State determine access to the whole European job market for the inhabitants of the European Community. A comparison of foreign qualifications is necessary in order to assess whether they match the standard in a particular Member country. This comparison forces the Member States to enhance their vocational education to remain competitive on the employment market.

---

100 CEDEFOP, The role of the State and the social partners: mechanisms and spheres of influence, in Vocational Training No. 1/1992, Berlin, p. 10

3.2.4 The curriculum: the "TRIAD SYSTEM"

The " triad system" is comprised of three pillars:

- Continuing general education
- Theoretical knowledge for chosen career
- Work experience

Continuing General education

As observed in the introduction to this report, companies see weaknesses in basic education at every level of education, and regret having to make efforts to compensate this in fields outside their specialist know-how and which are not their main concern. Certain firms are forced, for example, to bring in schoolteachers to remedy serious shortcomings in the knowledge of their manual and clerical employees. It has been found that pupils in apprenticeships who have rebelled in the classroom do not always possess the components of that basic culture which the school system is supposed to give them, at least in Latin countries.

The concept of the " three cultures " has to be integrated into the curriculum of vocational education, though not with the same stress as in general education, because Continuing General education here is only one pillar among three others. The " three cultures " have to cover "the disciplines and methodological procedures which contribute to the organisation of logical thought, developing a critical mentality, and the ability to make relevant choices on the basis of a series of data. This means that more than in the past, it has to be open to technological, scientific, commercial components of our modern culture, and emphasise the use of modern tools for communication and exchange".[101] All this requires prowess in the written and spoken language, genuine scientific and technical knowledge, and fluency in foreign languages, particularly English. Vocational education, building on high-quality basic education, will enable civil society to look at it in a more favourable light.

Theoretical knowledge for chosen career

The " three cultures " can obviously not limit vocational education to a purely general intellectual education. Beside general education, vocational education schools should provide more specific professional courses according to the jobs people want to be trained for. As a matter of fact, vocational education has a tremendous diversified development and cannot be limited any more to the education of people for traditional factory jobs.

---

101 Andrieu J., op. cit., p.2

Schools will have to set up more and more courses suitable for the needs of tomorrow's economy.

The second pillar gives school children their speciality, their " professional skills " added on to the Continuing General education which will enable them to be flexible.

To have workers fully trained to meet the requirements of industry, we recommend that partnerships be set up with local companies. This enables schools to train their pupils in the way needed for the expansion of the regional economy. A partnership with companies and also with social partners is necessary for the setting of the Vocational Field curriculum, which could be different from one field to another and even from one region to another. The Vocational Field curriculum should be discussed and set by all the partners involved in this type of education: parents, schools, representatives of workers, representatives of employers.

Work experience

Both General and specific professional education are not sufficient. There is no point in educating minds, if they are not able to make use of what they are taught. So technical education is also required. Work experience is the third pillar of the " triad " system.

- special training workshops

Schools must take care of the training in the basic trade in simplified workshops which make no attempts to reproduce the complexity of industrial work. The training workshop is the place set up for the systematic transmission of knowledge and an initiation into scientific methods of working. It cannot avoid the time-lag between the techniques connected with its machines which will always be a little out of date, and the technologies being used in firms, which are derived from equipment which is undergoing constant innovation. It makes sure that the student discovers the internal workings of the machines and equipment, so that future workers can reconstitute the process, and take the necessary actions.[102]

However, vocational training cannot settle for practical training in schools. The evidence of this can be seen in the following example. "Normally, in the school system, what the students are expected to produce is judged against standards fixed in advance. At school, the principle of "excellence" prevails. Markings will deviate from the norm, and will be

---

102 Antoine F., Grootaers D., Tilman F., De l'école à l'entreprise, Manuel de la formation en alternance, Brussels, Vie Ouvrière, 1988, p. 31

expressed in percentage terms against what is judged to be totally correct (i.e. 100%). If this deviation does not exceed a threshold tolerance of 40% or 50% of total success, pupils may still pass! In working life, however, a different principle prevails : "perfection". This is not defined absolutely but in relative terms, according to a range of requirements which may vary depending on the context. If the level of perfection is not reached, the work is purely and simply rejected, and the worker is told to start again. What customer will accept a loaf that is 50% burnt, or a machine repair which means it will work only half the time?"[103]

Since the school world is so different from the world of work, special training workshops are not sufficient to complete the training. Even more so as most colleges cannot afford to buy certain tools which are very expensive and highly sophisticated.

traineeships

The firm offers a "real-life" context. Thanks to this real situation, and the fact that it gives the opportunity to observe experienced workers, it enables pupils to carry out tasks on full-scale and in their entirety. "It is the only way to learn "the tricks of the trade" so essential to workers, and which they have gained over years of experience. This knowledge is vital for carrying out the job. The firm gives the trainee the opportunity to confront difficulties never met before, and which will have to be solved by calling on the assistance of other more hardened workers, and/or just working it out by him/herself. Finally, it can give the trainees the opportunity of seeing, getting explanations about, and perhaps using the most sophisticated technologies."[104]

"After a traineeship in a firm, where this has been well-prepared by the firm and by the college, not only do the students gain real knowledge of the world of work, but they also return with a completely different outlook on college. They realise the constraints of working life. They see the level of studies which they need to attain to have an interesting job."[105] They discover that the concept of excellence alone will not enable them to position themselves well on the labour market, and they will have to adapt to the concept of perfection, which is the only one accepted by the economy. Their fantasies about working life have disappeared, and they see the harshness of reality. As a result, students become more interested in what they are being taught. They understand, thanks to the traineeship, the MEANING of their education. This suddenly becomes a goal to be attained.

---

103 ibid., p. 108

104 ibid., p. 30

105 Béhar J.-C., Les "Cadettes Entreprises", in Autrement, Paris, January 1991, n°118, p. 59

One of the keys to the success of traineeships in industry is the tutor who is an extremely competent instructor from the professional and pedagogical viewpoint. He or she should be appointed by professional associations. His or her role is to make the trainee acquire the requisite professional know-how, according to the rate of progress determined in co-operation with the education body, and be the reference point for the trainee within the company. The tutor must therefore facilitate the transmission of knowledge and know-how. Apart from the rapid acquisition of artisanal capacities, the tutor must also ensure that the trainee acquires "extra-functional" skills which are so important for personality development, communications skills and the professional availability of young people: self-confidence, autonomy, willingness to learn, creativity and curiosity, discipline and reliability. All the qualities which will be necessary for the business to run smoothly. The trainee must also know that the tutor is there to answer questions, to help to understand what is going on, and solve any little problems which may arise.

Tutors will also have to carry out several evaluations of their students' learning during the traineeship. As tutors have a prime pedagogical function, it will be up to them to organise regular meetings between each student, a representative of the college, and a representative of the firm. These assessments are intended to evaluate the change in the knowledge of the student, the causes of any setbacks, and achievements observed.

We recommend that professional associations should recruit tutors who are voluntary and responsible, with a personal interest in education, and prepared to cooperate with the school.

teaching via simulators and expert systems

As pointed out above, the development of an economy using more and more hyper-technical tools makes a traineeship within a company more and more difficult. *We recommend a financial partnership between the firm and the college with a view to purchasing hardware for computer simulations and expert systems.*

These are widely used for learning to pilot aircraft, for example. They are spreading to vocational education courses, using sophisticated hardware which creates a new type of relationship to the object to be produced, entirely simulated by the machine.[106] Through simulators and expert systems, students not only acquire the necessary knowledge but do not run into productivity problems. Thanks to simulators, they can receive vocational training at the same level as that obtained in the firm.

---

106 Antoine F., Grootaers D., Tilman F., op. cit., p. 105

As for assessment, it is obvious that this will be carried out from the point of view of "perfection" and not "excellence", or else there is the risk of falling into the trap of the school evaluation. This is only possible, of course, if we do not replace technical training by simulators. The second building block must retain its *raison d'être*!

3.2.5 Decentralisation and integration

Transformation of vocational education systems are certainly necessary. In many European countries vocational training is the sole responsibility of the central departments of ministries of education. And that is precisely where the stumbling blocks lie.

From the viewpoint of supervision, more attention must be paid to streamlining administrative control over vocational education, and handed over to local administrators or decentralised from government. Agreements between local educational establishments and firms at local level should be encouraged, while confirming the need for certificates recognising achievements to be valid nationally. *Once more, we recommend the concept of decentralisation and integration, described in detail in the previous section.*

3.2.6 Partnership with industry

Bringing together colleges and industry

Some people may believe that firms and professional bodies may have a deliberate aim of taking control over the education system, to the detriment of the professionals within the education system itself. This is certainly not the intention of the executives interviewed. They merely think that school can no longer provide on its own all the education needed for a first job. It retains a priority vocation for basic education but, as soon as it is a matter of finding a job, it must accept other partners, in the world of business. We do not recommend twinning, but rather genuine partnership.

Combining the strengths of education and industry must be done on an equal footing: it will only bear fruit if this is a genuine partnership, i.e. if each party enters into it with their own concerns. For the school, this means developing the whole human being and not just the future economic resource; this applies to all pupils, not just to those whose skills match the needs of businesses. It also means developing their autonomy, capacity for reflection, sense of responsibility not only in relation to the firm, but in relation to society as a whole.

Industrialists' influence on the curriculum

We recommend that, as a partner in the vocational education process, industry should, in future, be consulted about the content of curricula for the theoretical knowledge in chosen vocations, and also their examinations and the award of certificates.

Moreover, it is recommended that administrative authorities responsible for schools, colleges and universities should accept an increased representation of industry in their governing bodies. This industrial representation will be an extremely strong influence in the direction of changes, but only if governments have accepted the principle of decentralisation/integration of education systems.

However, most national education systems are not yet ready to take the risk of accepting "non-statutory teaching posts" outside their direct control. They should do so, however, because modern companies which are open to change and adaptable will always be well ahead of education establishments vainly trying to keep up with the constant changes in technology. The role that industry can play in determining the content of the curriculum cannot be denied. When students realise that college, in partnership with industry, will make them into economic actors ready for the world of work, their view of their college will change and become much more positive.

A partnership towards common objectives

It is interesting to note that when teachers have tried to cooperate with firms, they have discovered another important reason not to distrust the world of business; the objectives of both parties were often much closer than either had imagined!

However, it cannot be denied that there are certain differences that characterise the two systems. The most obvious difference is that firms are profit-making bodies, having to take into account balance sheets and their shareholders' interests, while education is a social activity, the results of which are evaluated according to a series of non-financial criteria.

Amazingly enough, according to some indicators this cultural difference could diminish in the next few years. Firms are increasingly pursuing objectives not directly linked to making profits, possibly because social responsibility (for example, in relation to the environment) is becoming more important to their customers. At the same time, education is more inclined to define concrete results to be achieved (in this case, too, under pressure

from its customers), and link these results to the situation of the economy and employment.[107]

The advantages of a partnership

The direct advantage of working with colleges most visible to employers is the improvement of recruitment prospects. At the end of their schooling, young people may be encouraged to apply for a job in the firm where they did a traineeship during their time at college.

In view of the downward demographic trends facing Europe, firms will be competing to recruit young people, and they will have every reason to stay in contact with their trainees. It should also be borne in mind that recruits who have never had any contact with their employer are more expensive to train and tend not to stay in their job a long time. This reason alone is sufficient justification for working closely with schools. A real partnership can favour such contracts

It is at local level that partnerships are most effective. This seems to apply even more when one considers that regional requirements vary from one region to another. Colleges must therefore have the latitude to work the way they want with businesses, and the criteria of the national curriculum must not be so constraining that they stifle all originality in local projects.

We recommend that a committee should be set up within any European vocational education school, consisting of members of the college and a delegation of parents and local industry. This committee will have the main task of deciding the content of local partnerships depending on the requirements of the region, without however being restricted to this. Under no circumstances should young people be prepared only for their region, because this policy would be a barrier to mobility of workers within Europe.

Two cases of best practice for understanding industry

If the world of industry still frightens some people, the following two examples represent best practice. All Member States are invited to build this kind of teaching into their curriculum.

"In France, the *Jeunes Enterprises* movement, which arose out of the *Jeunes Chambres économiques*, came up with the idea of helping young people to set up and run within their college scale models of stock companies, with capital, personnel, problems of pay,

---

107 OECD, Schools and businesses: a new partnership, Paris, 1992, p. 22

taxes, sales etc. The young people themselves determine what they are going to produce, and the amount of their capital from the shares that they sell to people they know. They have to face all the problems of the life of a company, including those posed by social charges and VAT. The latter amounts are paid to the Jeunes Entreprises association, which puts them aside, waiting until the end of the year to return them to the team concerned or to repay the shareholders or, for example, to finance a study trip".[108]

"The United Kingdom set up a programme in 1985 aimed at encouraging the formation of a mini-business in every school in the country - after two years of operation, the result was impressive: there was a mini-business in 60% of schools. This programme was designed to teach "enterprise" in its broadest sense, while "training for business" has become a topic taught at all levels of the national curriculum set up under the 1988 Education Act. The initial objective, i.e. to give pupils the opportunity to discover what the spirit of enterprise is, was certainly achieved if one considers the number of businesses set up. The ambitious objective, which was to teach young people to show more initiative in their studies, was also achieved in many cases, but on this point the results vary greatly from one type of school to another."[109]

This type of pedagogical approach will enable students to gain a grasp of the business world, which even now seems so remote from them. We encourage every step taken in that direction.

---

108 A la découverte de l'entreprise, in Autrement, Paris, February 1985, n°67, p. 179

109 OECD, 1992, op. cit., pp. 64-65

CONCLUSIONS

Nobody is trying to subject the college system without warning to the constraints of the immediate requirements of industry, writes J. Andrieu, but nobody can accept leaving it in ignorance of reality either. It is time to say NO to UNIFORMITY![110] To conclude, we reaffirm the principle of the " triad system " through local partnerships, the only ones capable of meeting the requirements of regions.

---

110 Andrieu J., op. cit., p. 123

4. OPENING UP TERTIARY EDUCATION

4.1 Diversity and differentiation

The borders and distance established in the nineteen century between the University and other institutions of Tertiary Education are progressively being overcome. Some differences still exist. "The university is more orientated towards the acquisition and production of knowledge. It demands the ability to think abstractly in the context of a pedagogy founded on analysis and deduction. Experimentation is done in the name of science."[111] It characterises itself principally by its research, its multidisciplinary approach and also action but only in certain specific fields (engineers, doctors, lawyers, economists...).

"Non-university Tertiary Education is more orientated towards action and the transposition of knowledge. It demands a more practical mind situated in the context of a pedagogy founded on synthesis and induction."[112] This practical aptitude has the opportunity to develop during the placement in industry. Lectures also have different qualifications: a lower academic level but with more advanced experience of the world of work, combining teaching activities with a job in industry. Finally, these institutions do little or no research.

Each of these types of Tertiary Education have their specific *raison d'être*, and thus at the national level as well as at the European level, everything should be done in order to enable them to enjoy the same status and prestige. It is necessary to accept and distinguish their roles and not to assimilate the non-university institutions into the university at all costs. Both are part of Tertiary Education, but each has its own particular role : the university for research, multidisciplinarity and sometimes action, the non-university mainly for action.

---

111 Frère J.-P., Vers l'harmonisation ou le maintien des spécificités, 10 March 1993, p. 4

112 ibid. p. 4.

4.2 Major challenges

4.2.1 Mass education and quality

"The total number of annual new entrants in Tertiary Education in the EU is presently estimated at about 1.7 million people, of which about 65% (1.1 million) are enrolled at universities, as against 35% in the non-university sector. Overall, about 80% of the 2.1 million secondary school diploma holders enter Tertiary Education in the EU area.

Enrolments in Tertiary Education in the EU area are presently estimated at about 8 million students. Two countries (France and Germany) have passed the 1.5 million mark, and three more (Italy, Spain and the United Kingdom) have over 1 million students. Enrolments in Tertiary Education in those five bigger countries account for 85% of total EU enrolments.

About one student in four is enrolled in the short, more vocationally oriented courses of the non-university sector which exists formally in all countries but Italy and Spain, where all (or nearly all) courses are at university level.

Enrolment patterns differ markedly among countries. The non-university sector is strongest (with over 40% of total enrolments) in Greece, Ireland, Luxembourg, the Netherlands and the United Kingdom. Only four countries (Denmark, France, Greece and Spain) achieved (or are close to) parity between genders, with women accounting for about 50% (or more) of total enrolments."[113]Tertiary Education will certainly be called on to become a mass form of education. And, this trend does not mean that Tertiary Education "will be "bastardised", but rather will become even more diversified in its courses of study, its objectives, content, teaching methods, and not at all continue designing its first years of study as if the only goal worth achieving in life was to gain access to the highest levels of university research!"[114]

Concerning the trend for university to become a mass form of education, many rectors are firmly convinced that despite the drop in the demographic figures, student numbers will remain at their current levels or even increase. Current UNESCO estimates indicate that

---

[113] TASK-FORCE Human Resources, Responses to the Memorandum on Higher Education in the European Community (draft), synthesis report: Participation in and Access to Higher Education, Brussels, Commission of the European Communities, 1993, p. 23

[114] Andrieu J., op. cit., p.135

there will be some 120 million young people seeking Tertiary Education by the year 2040. Most of them will be in the developing world.[115]

Three reasons for this phenomenon[116]:

- sociological : the development of democracy in Western free societies will lead to a lengthening of compulsory education and an increase in the level of attendance of post-compulsory education. This trend can also be attributed to a change in social behaviour, accompanying a modification of the social structure of our society. Over the years, the degree has become the best means of social accreditation.

- economic : as already stated many times in this report, in view of the development of the economy and scientific and technological progress, workers will have to possess a higher level of skills, based on knowledge. For this to be achieved, there will have to be a partnership between Tertiary Education establishments, business and public authorities.

- internationalisation : internationalisation is the key word in Tertiary Education for the 2000s. Internationalisation is linked to policies and developments outside Tertiary Education. Student mobility has long been an element of foreign policy, and this aspect is being strengthened. With respect to free access, a major problem that should be solved on a European level concerns access, especially to non-university functions.

A legitimate right?[117]

Should everyone have access to Tertiary Education? Yes, unreservedly. Should everyone be able to complete Tertiary Education successfully? No, certainly not. A careful bricklayer or skilful plumber or a conscientious road sweeper are more useful and respectable than a garrulous and incompetent intellectual. Equality before the education system is a legitimate objective. Equality in education is a fallacious objective.

4.2.3 Failure and dropping out

A rapid survey

Failure and dropping out are a social problem. Both figures and comments drawn from a study by Jean-Pierre Jallade[118] are very eloquent:

---

115 UNESCO, Strategies for Change and Development in Higher Education (Policy Paper on Higher Education prepared by the Division of Higher Education), May 1993, p. 15

116 TASK-FORCE Human Resources, Colloquium on Higher Education and 1992: Preparing the year 2000 (Conclusions), Brussels, Commission of the European Communities, 1990, p. 63

117 Cauchies J.-M., L'Université et la montée de l'ignorance, in Bulletin d'Information des Facultés Universitaires Saint-Louis, Brussels, 1992, p. 16

"In **Germany**, the overall drop-out rate in Tertiary Education before obtaining a degree is of the order of 17% in universities and 14% in the Fachhochschulen. Girls are twice as likely to drop out of university as boys. A quarter of them will not reach the degree stage, compared with 11% of boys. In the two types of institution, more than two-thirds of drop-outs occur in the first two years of study, which appears to indicate that Germany has a problem with its "first cycle" of courses, even if these do not exist as such. The excessive duration of university courses is considered as the main cause of dropping out. In fact, while relatively few students drop out in Germany (except the girls), the duration of courses is continuing to get longer : even if the concept of repeating a year hardly exists due to the "destructuring" of studies, the result is the same, because it requires a very long time to obtain a degree.

In **Sweden**, a study monitoring students who were starting courses in 1979/80 showed that 85-90% of students on short course cycles (up to three years) successfully obtained a degree after three years. The situation was not so bright for long course cycles, where barely 60% of students went the distance to receive a degree. The situation is healthy for medical and paramedical students where 70% of students obtained their degree, but mediocre in long cycles in scientific and technical subjects (57% of graduates) and quite frankly poor in the long cycle of business studies and social sciences, where barely one student in three (32%) took finals. If one adds that these rates of taking examinations are calculated to allow for retaking one year, it has to be said that the long courses in Swedish universities are having some difficulties in getting students all the way through their studies.

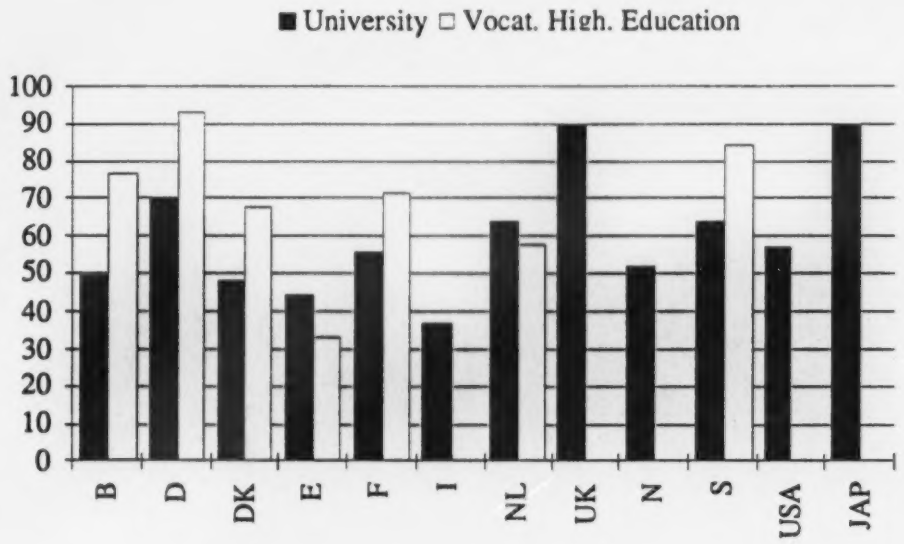
In **Spain**, the internal efficiency of the technical subjects is lower than those in non-technical subjects. Over a third (35%) of students repeat the first year in technical colleges (three years) and in the higher technical colleges (five years) which are, however, more selective than the others. Apparently this situation can be explained by the inadequate scientific preparation in secondary schools. In non-technical subjects the situation is a little better, with levels approaching 50%. In the four universities in Catalonia, which were the subject of a recent study, the students take an average of 6 years to complete a cycle with a theoretical duration of three years. For students enrolled in 5 year courses, the average actual duration of their studies is eight years and eight months, while the situation is even more catastrophic in certain disciplines like architecture and maths. This state of affairs is explained by certain characteristics of Spanish "student life"; many students have jobs (one in two at the University of Barcelona) and cannot devote

---

118 Jallade J.-P., L'Enseignement supérieur en Europe, vers une évaluation comparée des premiers cycles, Paris, Les études de la Documentation française, 1991, pp 88-95

themselves full time to their studies, which is why so many repeat a year. Dropping out and restarting courses one or two years later is a very common phenomenon, because this is allowed by rules which are very lax on this point.

In **France**, in the first university cycles, one undergraduate in two obtains the DEUG in three years (29% in two years), which is very low. The success rate is even lower for those on technology courses; only one in five obtains their DEUG in three years. Dropping out of higher courses is four times more common among technology bachelors than those on general courses: 41% compared with 10%."

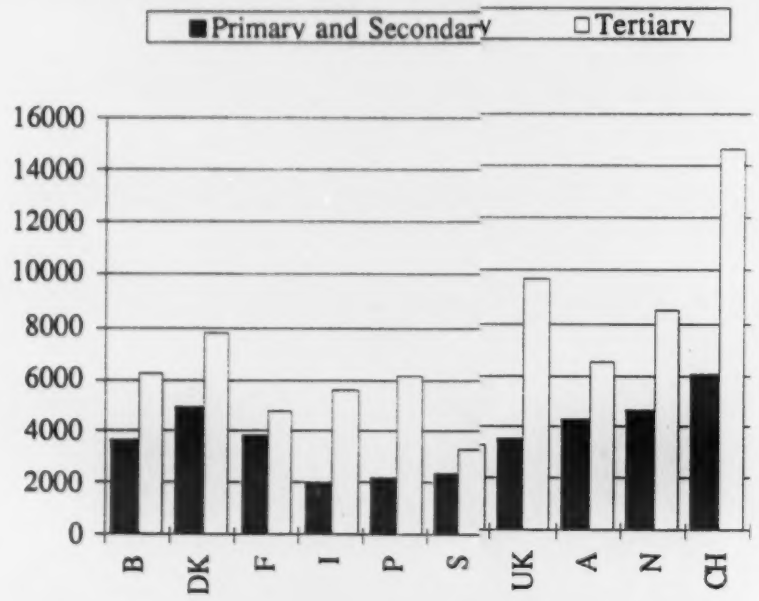


Completion rates in higher education
Percentage of students completing full study programme
(OECD)

Considering both this brief outline of the internal efficiency of some European first cycle courses and the OECD figures, it appears difficult, if not impossible, to draw any firm conclusions from the various national situations. As could have been expected, the non-university institutions (Fachhochschulen, Polytechnics and Colleges) or short vocational cycles in Sweden and Spain are generally more efficient than long university courses: students are generally less likely to abandon courses, and the majority obtain their degree within a reasonable period, i.e. without repeating - or seldom repeating a year, the notable exception being Spain.

These figures are not really surprising. In the majority of existing systems, students "specialise" earlier and earlier, and are not prepared for a basic education which invites them to reflect. If the education system which we are recommending is set up, statistics for success at university will be positively influenced.

Economic consequences.



Public expenditure per student per year in converted US$
(OECD 1991)

Failures and drop-outs have to be taken seriously into account in such a report for their economic consequences. As IRDAC[119] stated in its last report, " massive drop-outs and long staying-on rates are a negative factor for competitiveness since they represent a considerable waste of resources to society and reduce the productive period in a lifetime. There are also serious social considerations about equity vis-à-vis the tax-paying working young people of the same age who indirectly contribute to the financing ". Students should not have any right to waste the resources of their community. Therefore, all students should know the cost of their Tertiary Education as they enter that level of

119 IRDAC, 1994, op. cit., p. 45

education in order to make them both aware of the investment of the community and more responsible during their studies.

Proposals to limit failure and drop-outs.

- the concept of quality

A redefinition of the concept of quality is required in a mass education system. There are various Tertiary Education institutions in Europe. At both ends of the spectrum of those institutions, there are two completely different models: at one end, institutions that are very elitist, focused on research, and at the other end, institutions open to all corners, trying to educate the " honest citizen ". These institutions meet a diversity of student needs and abilities, as well as their variety of demands from society.

A crucial dimension of Tertiary education quality is to be found in the very diversity of Tertiary education system. This has consequences for the views of quality that should be developed in such a diverse system. Birnbaum[120] makes a distinction between three views on quality: the meritocratic, the social and the individualistic view. The meritocratic view refers to quality based on " institutional conformity to universalistic professional and scholarly norms and uses the academic profession as a reference group ". The social view considers " the degree to which the institution satisfies the needs of important collective constituents ". The individualistic view emphasises " the contribution that the institution makes to the personal growth of students. It is, in fact, the tension between the three different views that provides the diversity that protects and strengthens the Tertiary Education systems.

The concept of quality should not be reduced to the concept of quality used for scientific research. Quality could also mean excellence, perfection. *We therefore recommend the launching of a study on the redefinition of the concept of quality.*

- the teaching-assistant

High-quality education obviously involves academic support which is beneficial to the students. Providing proper support in the early courses should be the prime concern, especially knowing that success or failure in this field largely depends on the number of teaching staff who can be devoted to this task.

---

120 Quality management and quality assurance in European higher education, Brussels, Commission of the European Communities, 1993, Studies, n°1, p. 8

We recommend that Member States facing the problem of mass education should establish on an official basis the career post of teaching-assistant. Teaching-assistant posts would be temporary. Teaching-assistants would have no obligation to carry out research. This profession should allow large-audience lectures to be abandoned in favour of classes of 30-40 students. Teaching-assistants would compose their courses based on their professional experience, often acquired outside the Tertiary Education establishment, and based on research carried out by their researcher colleagues. Yet, the course content would be written under the supervision of a Tertiary Education Professor.

- orientation programmes

Many drop-outs happen during the first year of Tertiary Education. One way to stop this trend would be to establish orientation programmes as early as the general and vocational education level (the third link of the Education Chain), to help prospective students to find their " way " in Tertiary Education. These orientation programmes should not be used to eliminate students from Tertiary Education but rather to distribute them among various Tertiary Education establishments and guide them into disciplines or courses suited to their abilities. Many students would avoid wasting a year or two spent trying to surmount obstacles which they are incapable of overcoming.

Those orientation programmes already exist in some European countries[121] *but we recommend to governments who have not yet done so to establish orientation programmes as an effective means to cope with mass education.* These orientation programmes should also exist at the Tertiary Education level to help students to be reoriented, if it is necessary

- Open Distance Learning institutions (ODL).

Open Distance Learning institutions are another means to face failure and drop-outs due to mass education. Such institutions allow students to learn at their own pace. These institutions should therefore stop being seen as designed only for mature students.

Every student should have access to these Tertiary Education institutions which should not limit themselves to a specific range of subject matters. Open Distance Learning institutions should become as " general " as possible, like other institutions (see section 4.6).

---

121 EURYDICE,1994, op. cit., p. 84

4.3 Broadening finalities and leaving the " cocoon "

4.3.1 Specific features of Tertiary Education

Shaping the mind

- transmission of knowledge

It is true that there is a clear danger in wishing to limit Tertiary Education to its economic function, i.e. only meeting the needs of industry. It should not be overlooked that, in addition to their other functions, they "are the cultural centres or "think-tanks", offering a forum for learning, research, social and political debate"[122]. This is confirmed in the words of the Magna Charta Universitatum Europaearum (Bologna 1988): "the university is an autonomous institution, which produces and transmits culture in a critical way, through research and education".

Tertiary Education therefore seeks to awaken critical, multi-disciplinary minds, able to gain a thorough understanding not of a particularly mass of knowledge, but rather of the process of production of knowledge. Therefore, it has to learn how to learn rather than teach!

- the concept of " three cultures "

An equilibrium between the " three cultures " should be maintained at Tertiary Education level. It is essential to keep the balance between basic education and methodological training on the one part and the indispensable specialisations, as well as the development of professional competencies, on the other hand. What is needed here, is an interdisciplinary approach which is very difficult to find. This interdisciplinary approach should be inserted in the curriculum of the first years of Tertiary Education.

Yet, the " three cultures " should not be added as such to the curriculum like new courses. They have to be integrated into the existing courses but this will need a lot of creativity for professors who will have to re-think their whole courses. Therefore, we recommend the launching of a comparative European study to see what has been done so far in this domain. ERT and CRE could help for such a research.

---

122 Reactions of LC and CRE to the Memorandum on Higher Education in the European Community, Brussels-Geneva, June-November 1992, p. 7

Academic freedom

Academic freedom is characteristically a right to which the Tertiary education teacher and researcher may appeal even against the authorities of the Tertiary education institutions and his or her colleagues. The function of granting this right is that only by allowing academics freely to make known the findings of their scholarly work can the advancement of knowledge be expected.

"Academic freedom is to be distinguished from autonomy. Whereas academic freedom is first of all a right of the individual academic, autonomy is the right of the institution and its component faculties and departments. It is a right to decide, independently from external authorities, on certain internal affairs. Through autonomy, academic freedom can be protected, but autonomy is also functional to the advancement of teaching and research. These two functions constitute the legitimisation of autonomy, but at the same time they imply limits.

Exercising the right of academic freedom may also have a political impact. This is obvious, particularly but not solely in the humanities and the social and behavioural sciences. In accordance with their international traditions of scientific development and learning, universities and other institutions of Tertiary Education educate the citizens of this continent towards rational behaviour, intellectual tolerance and democratic participation and encourage critical and responsible thinking. But one cannot analyse this question without at least implicitly criticising many existing practices and opinions; one cannot jump to recommendations without encountering conflicting interests and values. It is precisely this critical function which Tertiary education institutions, especially universities, have to fulfil in order to contribute to the democratic functioning of society."[123]

The democratic structure

"The modern Tertiary education institution has to be characterised by a democratic culture and structure. A democratic culture implies that the relations between teachers and students are characterised more by a mentality of equality than by a hierarchical, let alone authoritarian approach. Teachers and students are equals in the learning process as soon as they enter the classroom.

Furthermore, the relations between teachers of different grades and between teaching and auxiliary staff will manifest more the approach of a joint effort in a common task than a

---

123 Council of Europe, Standing Conference on University problems, Conference on Universities and Democratisation, Warsaw, January 1992, pp. 5-6

status differentiation. A democratic structure of decision-making is needed. Participation of all groups is needed. Participation of all groups in decision-making processes must be considered as natural."[124] A real partnership among staff is a key to the quality of the institution.

When focusing on secondary education, the positive impact of the participation of pupils in decisions concerning their school was stated. That appears to be even more the case in Tertiary Education.

We recommend that the various Tertiary Education institutions should incorporate student representation into all levels of decision-making within their institution. In future, they will have to be considered as responsible adults. Students who know that they will have their say via the representatives that they have elected, will feel part of their institution and be proud to belong to it, and therefore make every endeavour to succeed, and deserve the academic qualification of that same institution.

4.3.2 Reinforce the three basic missions of the university

Research

The main characteristic of university education is that it bases its work on research. Therefore, this has a considerable importance in the transmission of knowledge.

The research pursued in university is primarily fundamental in character. Fundamental research, like teaching, must be considered like collective property, a public asset. The external aspects are essential here too, both in the terms of economic spin-off and that of knowledge in general.[125] Therefore, it is a mistake for a country to restrict its research. In the long term, it is democracy and the economy which will suffer.

- evaluation of the research[126]

"Quality assessment of research activities should seriously solve the social accountability principle of the universities and their research. As the practice of research moves towards plurisdisciplinarity, it will be necessary for universities to ensure that adequately trained

---

124 ibid., pp 5-9

125 Thys-Clément F., Recherche et Enseignement: Efficacité, Equité et Volonté Collective (Speech on 1 October 1990), Editions de l'Université de Bruxelles, 1990, p. 9

126 TASK-FORCE Human Resources, Responses to the Memorandum on Higher Education in the European Community - Theme Report: Research and Research Training - (draft), Firenze, Commission of the European Communities, February 1993, p. 12

personnel are available, both for the conduct of research and for the management of its application to business and industry. A constant dialogue and interaction between authorities responsible for research and those responsible for education and training is essential at institutional, regional, national and at Community level, in order to ensure a proper articulation of effort between these two very important sectors."

- the effects of research on education[127]

"The educational effects of research are often underestimated. University research should be undertaken not only from a perspective of scholarly standing or for economic considerations but also as part of the overall renewal and development of learning, teaching and public service activities. It should therefore be undertaken not only in terms of the research project but also with regard to the ways in which research findings can be included in curricula and re-training programmes."

- the effects on the economy[128]

University research is able to exert leverage, or put another way, multiplier effects on private research and innovation, and therefore on the macroeconomic growth and public finances of the region, writes F. Thys-Clément.

"The results of a study carried out by Jaffe show the impact of the presence of a university involved in fundamental research on technological innovation. Two remarkable results emerge from this study:

- first, Jaffe demonstrates the existence of significant effects of the geographical proximity of fundamental research (FR) on innovation in the region in question. This proximity effect works both directly and indirectly by the existence of a positive relationship between FR and industrial research (IR) in the region;
- second, Jaffe indicates the extent of this relationship between FR and IR. The result obtained is impressive, since the order of magnitude of the multiplier of FR on IR is nearly 4. In other words, a dollar spent on university research in one country can generate four dollars of industrial research in the same country. Thus the criterion of macroeconomic external efficiency can certainly be met by university research.

---

127 UNESCO, 1993, op. cit., p. 12

128 Thys-Clément F., op. cit., pp. 7-12

Once the positive effects of the quality of education, and the efficiency of fundamental research are established, the question then arises of the scale of the financial resources which society wishes to allocated to education and research, so that they can fulfil their prime roles."

We recommend to Member States to invest in research, in view of the positive impact which it has on the industrial market, and consequently, on the labour market.

Education

According to the survey of ERT industrialists, companies are no longer looking for the easy way out of recruiting based on paper qualifications. As already stated, they are looking for people able to think and act, usually in a team, and capable of continuing to develop their abilities and knowledge. They are looking for an education oriented towards a direction of individual freedom and flexibility, which allows changes in direction and choice in personal development. Tertiary Education must therefore no longer be compartmentalised. Basic and specialised course programmes must be given which correspond to this new environment.

It is essential to maintain "the balance between basic education and methodological training on the one part and the indispensable specialisations, as well as the development of professional competencies, on the other hand. Such an approach will require major modifications in a large number of programmes which, instead of offering a harmonious mixture, are now specialising prematurely. Although the number of specialists must be maintained and increased, their training must take into account the growing role of multidisciplinary research, and the extent to which innovation and discovery are occurring in the areas where traditional disciplines overlap."[129]

As already stated, the concept of "three cultures" applies just as much to Tertiary Education. The need to safeguard basic education and to emphasise solidarity and respect for others and not just competitiveness and high performance should therefore be emphasised. It is only in this way that Europe will be able to form the "skilled generalists" which it needs so much.

Universities should be more involved in the Education chain. They will have to develop their Faculties of Sciences of Education, if governments decide to train teachers in this type of institutions.

---

129 TASK-FORCE Human Resources, Colloquium on Higher Education and 1992: Preparing the year 2000 (working document), Brussels, Commission of the European Communities, 1990, p. 9

Research in Education has practical and financial implications. Theoretical aspects on Education will in fact reduce some costs. *We recommend that governments should support research in Education and develop the Faculties of Sciences of Education. Universities have become more and more involved in the process of Education through their research and their specific programmes.*

Societal presence

It is of enormous importance to emphasise a fundamental social and indirectly global function of university and academe. This is primarily its role and function in providing a 'social critique'. University is a repository and generator of much knowledge. It is (or should be) a veritable hothouse of ideas and debate. That collective totality can be a powerful force and societal influence.

Second, it possesses or can encourage a sophisticated analytic perspective. Third, universities, like other Tertiary education institutions, in some ways play an important role in setting, formatting, or at least significantly influencing the attitudes and "mindset" of their students. Many such individuals may go on to occupy the most influential positions of the State: in government, in the Arts, Humanities and Sciences; in politics and the media; in industry and commerce; in international agencies and the general bureaucracy. No other sector possesses such influence and potential power on the development of democracy. Therefore it will have to play important roles in revitalising regional and local economies, in establishing more equitable systems for distributing social services, and in the preparation of a truly educated workforce.

4.4 The European dimension of Tertiary Education

4.4.1 European culture

Along the lines of the SOCRATES programme, a European dimension should be implemented at Tertiary Education level. As has already been stated, despite the national diversities, Europe is impregnated with a historical and philosophical culture. This common past is the very foundation of Europe, and it is there that Europeans look beyond the disparities to find a common link which enables them to share the specific values that are considered to be European. This cultural inheritage enables Europeans to gain a better understanding today of the European civilisation in which they live.

4.4.2 *European curriculum*

Universities and other institutions of Tertiary Education are already full partners in the process of European integration. In accordance with their international traditions of scientific development and learning, they educate the citizens of this continent for rational behaviour, intellectual tolerance and democratic participation. As autonomous institutions, they are prepared to take full responsibility for their contribution to the creation of a united Europe, where knowledge represents one fundamental element linking together not only Community countries but also the other nations of the continent.[130]

The European dimension should therefore be included in most curricula because Europe is increasingly becoming a political reality, which everyone must grow accustomed. However we make the point that "this dimension must not be imposed artificially", and that every attempt should be made to avoid "the impression that Europe is once again being 'thrown' in for good measure". The European dimension is acquired by learning about other cultures via programmes of exchange and courses given by foreign lecturers, as well as a specific course on the European institutions and its various institutions. This general knowledge course about Europe will enable students to break down certain barriers due to ignorance of the EU as an institution.

Mobility of students

As well as university courses on the operation of the EU, living and studying for a certain amount of time in another country is an ideal way of eliminating cultural barriers, encouraging friendship and mutual understanding, and establishing contacts which can prove invaluable in their future working life. Since 1987, 200.000 students have benefited from the Erasmus programme. This is a highly successful programme which we totally support for it enlarges the mind and develop the human being.

The European dimension should also exist in the third cycle of Tertiary Education. We support the setting-up of a European doctorate, as it already exists in Florence for instance. For this doctorate, a second European language should be used at least for part of the thesis and the examination and part of the work preparing the thesis should take place in another Member State.

Student mobility within the non-university sector of the Tertiary Education system still remains relatively low compared to mobility within the university sector. This situation results partly from the traditional objectives of the two sectors. "Universities are

---

130 Reactions of LC and CRE..., op. cit., p.19

internationally oriented. Traditionally international contacts and networks are very important on this level. Non-university Tertiary Education institutions on the other hand, do not have this international tradition. They train students for specific professions."[131] Nevertheless, due to the impact of exchange programmes, we support every step taken in order to enhance the mobility of students of the non-university sector of Tertiary education.

Mobility of academic staff

A European dimension should be included in the education of the 90% of students who will not have an opportunity to study outside their own country. Teacher mobility, resulting in as many students as possible having the experience of being taught by a teacher from another country, is seen as making a major contribution. So, we recommend that systems of lecturer exchanges should be set up between Tertiary Education establishments, where they would give lectures in a common language. Assimilating another culture also involves learning the language. It is less expensive to move a lecturer than a lecture theatre. In order to have a truly European Tertiary Education, sabbatical leave will have to be introduced for lecturers, with an obligation to spend a major part of this leave in another Member State.

Mobility among academic staff would thus become a cornerstone in the construction of a European culture. Since 1987, 15.000 teachers have benefited from the Erasmus programme. Efforts must be made to promote teachers' mobility and to overcome obstacles which would prevent it.[132]

4.4.3 European languages

Language competence, as already stated, is regarded as being of central importance to the creation and progress of Europe. Tertiary Education institutions should therefore present a multi-lingual voice to their clientele, since competence in language is necessary to support mobility, economic and administrative interaction and co-operation in practically every sphere of activity.

As recommended above, all Community citizens should have had the opportunity during their schooling, to acquire communicative competence in English in addition to their

---

131 de Jonghe J.F.M., Dillo I.G., Access to Higher Education in the European Community, Vol. I, (synthesis report), Brussels, Commission of the European Communities, 1992, p. 63

132 TASK-FORCE Human Resources, Responses to the Memorandum on Higher Education in the European Community: Italian report (draft synthesis report), Brussels, Commission of the European Communities, 1993, p. 5

mother tongue. Substantial proportions of the population should be expected to acquire a knowledge of two foreign languages of the Community.

It is therefore agreed that foreign languages must be an essential element in Tertiary Education with teachers and students being provided with opportunities to learn foreign languages and to use them in teaching and in studies. The need to create mechanisms in Tertiary Education which would encourage the use by students and teachers of at least one other Community language is stressed. *We recommend, therefore, to make language qualifications desirable for entry but compulsory for exit from Tertiary Education.*

4.4.4 *Educational networks in Europe*

European assessment

The internationalisation of European Tertiary education underlines the importance of the creation of quality assessment systems that can provide relevant information in a comparative, European context. Quality in any kind of institution - academic institutions included - cannot be assured without a mechanism of evaluation, quality assessment and control, which should be done at a European level. The evaluation process should start with and actively involve the academic and research staff, given their central role in the diverse activities of Tertiary Education institutions. Of course, as stated in this chapter, first, a study on the concept of quality has to be launched.

It is often argued in the literature on Tertiary education that, "for academics to accept and implement changes, they must trust and " own " the process in which problems are defined and solutions designed. This is certainly also the case in quality management. Only if academics accept quality management as their own activity will the system be successful.

Self-evaluation is a crucial mechanism for them to accept a quality management system."[133]

Quality assessment should further be done through peer-evaluation and especially, through one or more site visits by external experts. "It is crucial that these experts should be accepted by the institution to be visited as unbiased specialists in the field. They can come from many constituencies (including employers' organisations, industry and professional bodies) and, depending on the nature of the visit, they will need to have established professional backgrounds (academic expertise, managerial experience, etc.). The external visitors should visit the institution (or faculty/department) for a period of a few days, during which they can discuss the self-evaluation report and the plans for future innovations with the faculty. The visitors should also take the opportunity to interview staff, students, administration and (if possible) alumni."[134] The purpose of such " visits " is to help the institution to improve its level of quality. This evaluation will also allow mutual recognition of centres of excellence and possibly networking of certain departments.

"Accountability and evaluation - through self-evaluation, peer-evaluation, or external evaluation - are increasingly being recognised by the academic and administrative staff as essential to ensuring the quality of their institutions."[135] Therefore at the level of Tertiary Education, of whatever type, it is necessary to maintain the sense of rigour, and seek a certain excellence, by setting up procedures for evaluating the work carried out at regular intervals.

To implement the quality assessment, we recommend to governments to provide the necessary financial means only to Tertiary education institutions which have submitted themselves through both self- and peer-evaluation.

European accreditation

In the near future, there will be a "far greater demand than hitherto for quick, flexible and accurate mechanisms for the award of credit for previous academic qualifications and period of study carried out in other Member States, be it for the purpose of academic recognition, i.e. in order to facilitate further study towards additional qualifications, or for the purpose of professional recognition i.e. recognition for employment purposes."[136]

---

133 Quality management and quality assuance..., op. cit., p. 21

134 ibid., p. 21

135 UNESCO, 1993, op. cit., p. 14

136 TASK-FORCE Human Resources, Memorandum on Higher Education in the European Community, Brussels,

Co-operation and agreement between systems of Tertiary Education also become necessary in order to enable mobile workers and their families, who may be seeking to commence or to continue Tertiary Education on the basis of educational qualifications obtained in another Member State, to proceed with their studies.

"Successful implementation of a common system for transferring credits at European level would encourage student mobility, because it would enable each of them to choose in accordance with their professional and personal ambitions from among a far more extensive range of courses than currently available. While it can be anticipated that a majority will then return to their initial establishment (of origin), students may, nonetheless, decide to continue their studies or to go to a third establishment to complete their course of study."[137]

For this to happen, it will be necessary "to establish a working group at EU level, to deal with questions relating to an agreement for the adoption of common definitions concerning concepts such as "course units", "units to be capitalised", "semesters", etc. and the creation of "common European study units" and "modular courses"."[138] Through this proposal, we are strongly supporting both the setting-up and the development of the European Credit Transfer System which is already working very well.

European discipline-oriented network

Obviously, the question arises of the difference in standards, both between different Tertiary Education establishments and different countries. Why not consider a European solution to solve this problem? Countries who have doubts about the competencies of a student could require that he or she retake the exams at European level. If a pass were obtained, this would allow the student to study in another country.

Tertiary Education institutions should also join networks by co-optation. Bearing in mind that the standard of universities various considerably between one faculty and another, we recommend that discipline oriented networks be established at their level, rather than at the institution seen as a whole, but of course with the agreement of the central authority in order to keep the unity of the institution.

Commission of the European Communities, 1991, p. 37

137 TASK-FORCE Human Resources, La reconnaissance académique:ECTS, in Education/Formation, n° 4, mars 1992, Brussels, Commission of the European Communities, p. I

138 TASK-FORCE Human Resources, Colloque sur l'Enseignement Supérieur: Préparons l'an 2000 (conclusions), Brussels, Commission of the European Communities, 1990, p. 8

Once faculties are networked, thus becoming partners, students would be assured of full recognition of the credits they obtain. In this way, students can continue a cycle of studies in another Member State, without having to re-do the work already done, once they belong to the same network.

4.5 Balanced co-operation, where each partner plays a specific role

Partnership will become one of the foundation stones of tomorrow's Tertiary Education. Two forms of partnership appear to us to be preponderant: partnership with industry and partnership with the public administration.

4.5.1 Industry

Industry considers universities in the first place as the primary source of qualified graduates and researchers. The industrialists interviewed said that they were satisfied with Tertiary Education in their own countries. They have no problem with this link in the Education Chain. This, of course, does not prevent Tertiary Education institutions from adopting co-operation with industry as a fundamental part of their mission and from being ready to adapt their structures of courses and qualifications and the methods of course delivery to support this co-operation.
Industry should play a more active role by supporting national Tertiary Education systems, helping to create technological centres in each country based on the requirements of national industries, and favouring international connections to create a truly European technological Community.

The absence of staff mobility between the private sector and universities leads to real compartmentalisation between these two worlds, and for this reason, communication difficulties arise between them. To remedy to this situation, more academics should be hired from the business world, as is already done in some places. Vice versa, enterprises should hire Tertiary education professors (e.g. Philips which hires over 100 university lecturers).

In addition, Leaders of Tertiary Education institutions should be members of Business Boards as industrialists should be members of the board of Tertiary Education institutions. This is already happening and it works very well. We support each step taken in that direction because being member of a board will give an opportunity to the two " worlds " to meet, to interconnect and above all, to interact.

Industry should also be consulted to design the curriculum. Such a partnership, will enable the curriculum to be better adapted to the needs of economy, without reducing education to serving the immediate requirements of industry. Industrialists are too well aware of the importance of teaching the " three cultures " in Tertiary Education.

Partnership will stimulate competition. "Tertiary Education institutions, particularly in the developed countries, face even stronger competition from research institutions outside the academic community which, in many fields, possess better equipment and more resources. At the same time, public funds allocated for research carried out in academic institutions are subjected to greater administrative restrictions and academic researchers have to show their capacity to face competition with other research organisations and be able to adapt themselves to the new approaches to funding and to new organisational forms of co-operation in research."[139] This competition among institutions will enhance the creativity of the researchers.

4.5.2 Public administrations

The other envisaged partnership is that with public administrations. As stated above, the principle of independence should remain for university establishments in the fields of education and research. We recommend to the Member States to support and promote this principle whatever may be the level of public funding in these sectors.

The partnership envisaged, unlike basic education, is only financial. We very strongly stress that Tertiary Education must be seen as an investment and not as a cost, and that it should continue to receive its support, in the main, from public funds, in order to guarantee its independence and integrity and the support of many areas of scholarship of vital social importance. Investment in Tertiary Education produces "broad social benefits, as already stated, and thus education should not be viewed as benefiting only those individuals receiving it."[140] It is a European social asset.

4.6 Open Distance Learning

4.6.1 Introduction

Tertiary Education institutions largely concentrate on initial education and are deeply involved in the production of new knowledge. In addition to their educational task, they

---

139 UNESCO, 1993, op. cit., p. 12

140 American Council on Education, The Path to Productivity: Higher Education and Workforce Preparation, February 1993, p. 2.

have the accompanying mission of scientific research, both fundamental and applied; "they are often geographically distant from those who need it most; provide its courses at times, and over periods, that are inflexible; and are not well fitted to responding rapidly to the needs of new groups of clients, or to transferring knowledge rapidly from one area to another."[141]

Open Distance Learning (ODL) provides an answer to those problems. "By "Open Learning" is meant any form of learning which includes elements of flexibility which make it more accessible to students than courses traditionally provided in centres of education and training. On the other hand, "Distance Learning" is defined as any form of study not under the continuous or immediate supervision of tutors, but which nevertheless benefits from the planning, guidance and tuition of a tutorial organisation. Distance learning has a large component of independent or autonomous learning and is therefore heavily dependent on the didactic design of materials which must substitute for the interactivity available between student and teacher in ordinary face to face instruction."[142]

Open Distance Learning aims at populations that, due to their spatial, temporal, economic and social restrictions, have no possibility to attend physically an educational institution. "Learning technologies could also potentially play an important social role, and generate a high social return, in activities such as reducing the incidence of unemployment in disadvantaged regions, the reskilling of the labour force, meeting the needs of those with disabilities, and extending access to individuals and enterprises in remote regions. In addition, efforts should be directed towards upgrading skills of the 18-20 year age group who did not complete their second level studies. And as already stated, ODL institutions should be a means to face failures and drop-outs in other Tertiary Education institutions."[143]

The ODL institutions do not aim to compete with the traditional universities in the field of fundamental research. As institutions they are not always as well suited or as well equipped for this purpose. Therefore, they often seek the co-operation of the traditional universities in furthering the transfer of new knowledge to large sections of society, and

---

141 Wright P.W.G., Open and Distance Learning in Higher Continuing Education and Training with particular reference to SMEs, Brussels, Commission of the European Communities, 1991, p. 10

142 TASK-FORCE Human Resources, Open Distance Learning in the European Community , Brussels, Commission of the European Communities, 1991, p. 6

143 Information and Communications Technologies applied to Education and Training (draft), The Review Board Report, 1993, p. 13

maintain a research environment of their own only sufficient to permit academic staff to stay up-to-date and to maintain contact with the scientific community.

Universities and other educational and training institutions will continue to prevail as centres of knowledge and research, but not necessarily as the geographical location where students take advantage of their knowledge resources. More flexible forms of organising education and research opportunities will develop and will increasingly be recognised as normal methods of developing knowledge and skills, at least after initial school and initial Tertiary Education. Open Distance Learning will be at the centre of these developments.

Distance education should be a part of the overall philosophy of delivery of education and should be promoted at national and European level. Open Distance Learning should reflect the cultural variety in Europe and make another contribution by being used for the creation of multilinguistic and multicultural educational activities.

4.6.2 The flexibility of the system

"ODL institutions are easier to adapt to new methods, courses and contents, due to their intrinsic centralised planning and management, both administrative and academic; however, the high investment costs required for each new subject or diploma discourage frequent innovations, as well as the scrapping of older courses and materials."[144]

Knowing that the student usually has a job, he/she should be in a position to begin and finish his/her course whenever he/she wants to. ODL should therefore allow a learner to decide when to complete assignments and be assessed. "Yet there is actually some evidence that students tend to drop out less if institutions impose some rules on pacing."[145]

4.6.3 Curricula

When the course starts, the institution responsible mails a course package with all the pre-produced material from print to cassettes. Study guidance which the students would receive through file transfer and discussions among the students, and with the tutor, may take place on a computer conferencing system. The tutor may add additional material and/or frame new questions for discussion.

---

144 Rocha Trindade A., Distance Education for Europe, Lisbon, Universidade Aberta, 1992, p. 103

145 ibid., p. 33

Open Distance Learning curricula and courses must have an academic content and an academic level. Only in this way can academic institutions such as open universities prove their academic identity and mission. But in order to be valid to, and relevant, for students, courses as well as the curriculum should be centred on their needs and demands.

As a result, the curriculum is based on personal choice. The trend is to enable users to build up their courses 'à la carte' from a menu offered by ad hoc institutions. Greater openness and the individual tailoring of training courses correspond to changing trends in demand. Learning methods must also take account of people's "existing skills, the pace at which they can learn, their capacity for sustained attention, their vocabulary, and so on. All this can be summed up in the concept of 'proximity education': proximity to needs, facilities and individual skills".[146]

We recommend that this curriculum should be established by the student, the Tertiary Education institution, and the representatives of UNICE, in order to respond better to the requirements of the economy with a view to the student's professional career.

Both Tertiary Education institutions and ODL institutions should be held in the same esteem by society. This will be the case if the curriculum has been negotiated with the Tertiary Education institutions.

4.6.4 Accreditation

Qualifications gained through distance learning should carry the same status and recognition as those awarded for corresponding studies carried out in attendance at Tertiary Education institutions. This would enable students to move freely as between distance education and institutional modes of study. Open Distance Learning should therefore be seen as supplementing and complementing Tertiary Education structures to enable them to cope with the demands of the coming decades.

4.6.5 The contribution of technology

New technologies and learners

New technologies of information will sooner or later reach the Tertiary Education institutions. In 10-15 years time, the multimedia revolution will happen at the school level. Nobody should forget that these pupils will, one day, become students. Leaders of

---

146 Seabright V, Nickolmann F, Distance learning in Europe: Studies and Recommendations by the Council of Europe, Amsterdam, 1992, p. 24

Tertiary Education institutions should become aware of this revolution and see its urgency.

New technologies of information will not remain the monopoly of Open Distance Learning. Multimedia will offer simple didactic drill and practice style presentations suitable for some product knowledge and technical skills training. It can offer simulation for a variety of experience-based needs such as interpersonal skills and more complex technical skills.[147] Through virtual realities, students "will perform science experiments using equipment and facilities located anywhere in the world, including at international laboratories, in collaboration with some of the European's or even world's best laboratory scientists. Students will also take "field trips" to museums, observatories, science exhibits, and research centres without leaving their home or work place."[148] Of course, laboratories will still remain necessary. New technologies are not replacing them, these virtual realities are complementary to them.

Technology can also help overcome the shortage of trainers and make training more accessible to a wider range of learners than conventional methods alone can address. The processing power now arriving on desks, coupled with the storage and communications facilities at their disposal, take people into totally new intellectual dimensions. So, it will be possible to send audio-visual material over telecommunications channels in the same way as graphic and text data is now sent. In any environment where centrally-held information can be made available to distant locations, telecommunications can provide access to material not held locally, or not published on optical media for general distribution. This can substitute for a library in the conventional environment, providing access to a wider range of support material for training needs.

"If the learners normally use a multimedia workstation on their desk, then the training can be integrated into their day to day working environment. As interactive multimedia systems move into the home, companies may find it very effective to provide distance learning programmes for their employees which can be used at home as well as at work."[149]

"The ability to leave questions for tutors or other students to answer via an electronic mail or messaging service can greatly enhance the efficiency of the learner. The ability to

---

147 Sherwood-Roberts P.,Vervest P., op. cit., pp. 14-17

148 CSSP, Perspectives on the National Information Infrastructure, Washington, 1993, p. 11

149 Sherwood-Roberts P.,Vervest P., op. cit., p. 3 and p. 13

become involved in electronic conferencing can also enhance the quality of learning by substituting for the usual face to face discussions."[150]

"Co-operation between the European media industry and educational institutions should be increased to develop more TV and video material covering a wide range of curricula and available in the major European languages for use within the European Economic Area."[151] "For many skills development applications, multimedia has shown itself to be at least as effective, and in many cases, more effective than conventional training techniques. In some areas, e.g. flight simulators for aircraft pilot training, it is the primary training method."[152]

On-line Job Training Libraries [153]

"Interactive, multimedia, digital libraries will be available on job sites to provide workers with task-oriented information that they could use, at their own convenience and pace, to improve and upgrade their job skills and performance. Workers in any job - assembly line, retail outlets, sales or offices - would be able to continuously upgrade their skills and learn new skills at any time through customised training libraries.

Also, students will use on-line electronic libraries in classrooms and at home to learn more about any topic. The electronic libraries will include software tools to help students find the information they need, identify relevant data, analyse, and present the information and will provide access to information and reference specialists to help users locate the material they need."

4.6.6 Study centres

As the impact of interactivity in learning is undeniable, as stated above, study centres should be set up. These could be located in existing schools. This is part of the idea for re-allocation of the premises (7 days a week, 24 hours a day).

"Study centres are set up to bring the facilities the open university has to offer closer to where the students live. It is a place where some tutors reside so that person-to-person contacts can be established without travelling all over the country. Also, for a large number of courses, group sessions are organised to discuss or practise parts of the

---

150 ibid., p. 40

151 K. Kairamo, op. cit., p. 6

152 Sherwood-Roberts P.,Vervest P., op. cit., p. III

153 CSPP, 1993, op. cit., p. 11

course, and these meetings take place at the regional study centres. Study centres are also the place where exams can be administered.

The study centres play a role of a social nature. Man has evolved to communicate with others directly, and it is not unlikely that communication through a network will be satisfactory from a social and/or psychological point of view. In that case, study centres can be set up to deal with the organisation of social events to establish some kind of community feeling between students, and to organise events of social learning suitable to an academic institute like workshops, practicals, summer schools and so on."[154] Every effort needs to be made for such study centres to be established and operate in each country.

4.6.7 A European policy for Open Distance Learning

Open Distance Learning Network

In a Europe under construction, *we recommend the setting-up of a European Open Distance Learning Network, which would share the same curriculum.* In a decentralised approach: all partners would have to agree with the draft course outline, a common working language, the academic course level; the media to be used, minimum formal and didactic requirements, and the allocation of responsibilities.

The introduction of networks could increase the student's control of learning whilst making educational experience available over wide geographical areas. In addition, once again, such a network would encourage mobility among Europeans.

Interoperable European systems

"The technological infrastructure to support technology-based education and training is widely divergent between countries in Europe; and as a consequence, technology-based training approaches which work in one region may be unavailable, or inappropriate, in another."[155] The educational computing environment should be as standard as possible.

We recommend that the EU should set up the necessary structures for the harmonisation of technologies to be carried out, so that on the eve of the third millennium, the technology used for education, at whatever level, should be interoperable throughout Europe.

---

154 Haarder B., Open and Distance Learning in Europe, in EADTU-News, Heerlen, January 1993, n°. 12, p. 17

155 Information and Communications Technologies ..., op. cit., p. 13

European languages

EU should support "production and massive dissemination of Open Distance Learning resources for language training to support the Community's eleven languages policy, including measures to maximise the expertise of foreign language teachers, and to teach more students through the integration of open learning resources for self-study. Open Distance Learning can be a tool to strengthen a national language and support minority languages and cultures."[156]

However, one should bear in mind that "cultural and language differences in Europe are an obstacle to the creation of a market for flexible and distance learning. Yet new technologies such as automated translation, allow for efficient translation services, as well as simultaneous translation on different sound channels on the new generation of satellites. Experiments with these technologies should be carried out to identify effective ways of overcoming the problems of language differences."[157]

We recommend that the Commission should work together with large companies and national bodies to answer those European needs.

4.6.8 Conclusions

In conclusion, ODL represents the following advantages: flexibility (in particular the tailoring of training to individual needs within a firm); the possibility of carrying out training without staff leaving the work place; savings in time and money; the ability to have rapid access to 'state-of-the-art' technology; the avoidance of the physical strain of travelling and a means to face mass education.

ODL also seems to offer a means of addressing the training needs of SMEs which might, potentially, overcome some of the impediments to training (e.g. the need for absence from the work place).

If the Tertiary Education institutions wish to remain competitive tomorrow, they must incorporate ODL into their current structure. ODL will therefore be part of the existing structures.

---

156 Eklund P., Responses to the Memorandum on Higher Education in the European Community, Theme Report on Open and Distance Learning, (draft), Brussels, Commission of the European Communities, 1993, p. 8

157 Information and Communications Technologies ..., op.cit, p. 36

148

5. LAUNCHING A EUROPEAN STRATEGY FOR ADULT EDUCATION

5.1 No Systematic Approach

5.1.1 The situation

One of the most serious educational problems now facing Europe is the updating and upgrading of the skills and competence of its working age population in the rapidly advancing technico-economic environment.

Industry has realised that the educational level of its current workforce is not good enough. The competitiveness of Europe is at stake, as already stated. The technical and industrial development of European economies requires new opportunities and new models for the permanent updating and upgrading of European competence, and both the ERT and CRE have published studies on this.[158]

Adult education is a broad term covering all the possibilities for adults to acquire, update and upgrade their personal knowledge and competence. It is available from multiple sources, ranging from evening classes to in-company training courses and university-level courses.

In most European countries there is no overall coordination for a general framework for upgrading and updating individual competencies, despite the fact that, to be competitive, Europe needs a policy of adult education that is relevant to the European labour market. This important link in the Education Chain is the most disorganised.

There is

* enormous institutional diversity
* a great variety of curricula and teaching methods,
* a great variety in sources of funding
* no substantial research policy in this field.

---

158 ERT, Education and European Competence, January 1989
ERT, Lifelong Learning, June 1992
Otala L., European Approaches to Lifelong Learning, Geneva, ERT-CRE, 1992

Enormous institutional diversity

Up to now, industry has developed a systematic policy for its own workers. In the other fields of activity, the efforts have been scattered and dispersed. There is no European vision for a sustained development of adult education.

As stated by IRDAC when discussing Continuous Education and Training (CET)[159], "Overall, the lack of consistent data and comparability is in itself a sign that the CET (adult education) market has not yet reached a stable situation." In the EU there are an estimated 60.000 known training providers. "To put these figures into perspective, there are about 3000 higher education institutes in the EU. Many CET (adult education) suppliers are very small, although some major ones have emerged as well. The huge variety and high number of suppliers creates problems of transparency, both regarding the knowledge and access to the offerings as well as regarding its suitability and quality. There are no easy ways to ensure quality control and there is often little ground for comparison." IRDAC concludes that in reality there is no single adult education market, but several interacting markets depending on geographical area, subject matter and target groups.

Great variety of curricula and methods

There is also a huge diversity of learning process. There is no common curriculum. "In nearly every community and in every country throughout the world there has never been such diversity of people from different cultural, racial, social, economic, and educational backgrounds and consequently with very different ways of learning, thinking, and behaving. As a result, it is essential to find new ways of communicating and working together to confront the problems that threaten the lives of human beings, countries, even the planet itself."[160]

Great variety in sources of funding

Means of financing adult education are most diverse: private subsidy, state grants, personal loans etc. *We recommend that governments should enhance adult education by providing fiscal benefits for individual employees and their employers, for example tax benefits or subsidies, or providing mechanisms for the cost to be shared between the company and the employee.*

---

159 IRDAC, 1994, op. cit., p. 63

160 Dickinson D., Lifelong Learning for Business: a Global Perspective, Conference on Lifelong Learning for European Business, Oxford University, October 6-7th 1992, p. 1.

No substantial research or policy on adult education

If people are really serious about adult education, both thinking and process should be organised. If not, then Europeans will discuss much but do little for the next 30-40 years. The educational task facing Europe is immense. It is particularly worrying that so little effort is being devoted in Europe for investigating strategic capability.

Therefore, we recommend that everybody concerned with providing education should elaborate a strategy that will fill the gaps and create a convergence of European efforts.

Europe needs a coordinating body in adult education. The European Commission (EC) has a key role to play in developing and enhancing the Europe-wide adult education policy and coordinating the regional and national developments. Without coordination made by the EC, even national governments cannot agree on common principles and practices. It is urgent that the governments and the European Commission treat adult education as a social investment. *Therefore, we recommend that the EC should take the initiative to create and implement a plan for a Europe-wide strategy with common principles of adult education.*

5.1.2 The objectives

The right to learn is a basic human right and should be available to all individuals throughout their lives. Individuals should always be aware that they are responsible for developing their own competence through the three objectives of adult education, which are:

1. to update and upgrade knowledge and know-how,
2. to accelerate the progression of those who have the potential for advancement,
3. to help those who will take up new positions requiring prior training.

Knowing those objectives, Europeans should invest in their skills and qualifications over the whole cycle. In doing so they will achieve a balance between job security (which may mean being tied to a single enterprise) and flexibility (with possible loss of social protection). *We recommend that national campaigns should be started in all European countries to alert all members of society to the implications for them of the conclusion that learning pays.*

5.1.3 *Self-directed learning*[161]

Maintenance and development of professional competence is for the most part self-directed - as opposed to externally directed-learning. In self-directed learning the learner can control goal-setting, choice of material, learning strategies and methods as well as evaluation. The educator is seen as the facilitator of learning. Self-directed learning emphasises the importance of meaningful learning and it is considered as one of the corner stones of life-long learning process.

Studies show that for learning to be most effective, the material to be studied should be organised in a way that relates more to the way in which students think. Self-directed learning emphasises the importance of meaningful learning. According to the cognitive view of learning, informational discrepancy is brought about or, in the case of self-directed learning, will emerge. An attempt to abolish this discrepancy is made by acquiring new information or by deepening and broadening the already acquired knowledge. Yet very little research has been made to describe more precisely how such material should really be organised in different areas like knowledge, skills, understanding, applying theories etc. Those results would be an important basis for planning basic technical education studies.

Furthermore, learning must go with living ... but if everyday experience is the finest teacher, it must be faced in a way that make learning possible.[162] Few institutions indeed are designed around the idea that the first need of those who serve them is to learn. *We recommend that all institutions involved in adult education should provide curricula which will meet the needs of each self-directed learning individual in his or her specific field of work, personal life, way of thinking etc.*

5.2 Universalisation of Adult Education

5.2.1 *Access for everybody*

Every European individual should have access to adult education programmes. As stated in section 4.2.3, those programmes could be a means to face mass education demand at the tertiary level. This is also a tool for the unemployed to find a new job.

---

161 Kautto-Koivula K., Degree-Oriented Professional Adult Education in the Work Environment, Tampere, Acta Universitatis Tamerensis, ser A vol. 390, 1993.

162 Revans R., The consortium Revans (unpublished), June 1969

While striving to meet the challenges of a fast-changing market place, European companies have long recognised that the competence of their employees are their main asset. But to remain competitive, these abilities and skills have to advance at the same pace as knowledge and technology. Industry takes care of a part of that problem but it cannot do that job alone.[163]

5.2.2 European perspective

To be competitive, Europe needs a framework for adult education that is relevant to the European labour market in whatever form it takes. Cooperation between industry and institutions of tertiary education can provide support opportunities for adult education; but governments and individuals also have important roles to play. As already stated, all this should be done at European level.

A Basic European Framework[164]

The basic framework is the infrastructure needed by the competence development of industry and its employees. It is based on the concept of complementary interests of the employee, the employer and the educational institutions.

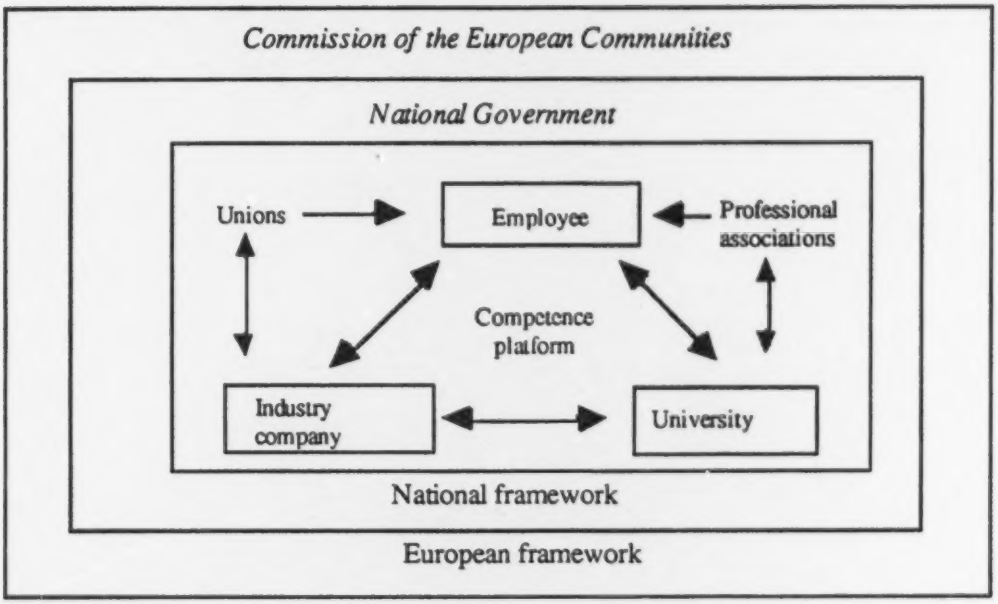
The infrastructure needed is a competence platform for Europe which encompasses national platforms. It should effectively benefit all competence and educational resources in Europe and provide effective possibilities to develop them. The competence platform also enables European employees to develop their competence throughout their working career anywhere in Europe. The framework only gives the basic policy and basic principles for practice, but the practice should take place locally. The competitiveness is generated locally through individual practical training and education measures. The contents of competence development can only be defined locally or regionally.

This preliminary framework can be refined by adding other players. National governments and the European Commission also have a crucial role to play as coordinators of the structure and common principles as well as through their funding policies and investment priorities, as already stated. Trade unions, professional societies and associations can also enhance adult education by impacting their members European employees. The framework provides the base for the structure of adult education.

---

163 ERT, Education and European Competence, 1989.

164 This section is based on Otala L., 1993, op. cit., pp. 162 ff.



Strategic Competence Development Groups

The needs and contents of adult education could be determined within a European framework by Strategic Competence Development Groups (SCDGs) which are formed locally or regionally to look after competence development of a particular area, a city, an industry, a group of enterprises or a subject matter. SCDG is based on an industry's or the sector's strategic plans and visions. Universities research resources can also be used in providing visions, and scenarios for example, for applications of a specific technology, or for a region, or a specific customer group, or a business. Tertiary education institutions provide adult education according to the competence development plan. The SCDG can have members from industry, universities, professional associations, research centres and government organisations. The driving force should be industry and the needs of future work. We support every step taken into that direction.

UETPs (University-Enterprise Training Partnerships) sponsored by the European Commission and TECS (Training and Enterprise Councils) in the UK are a good step towards the direction of Strategic Competence Development Groups.

Strategic Competence Development Groups could also involve SMEs. While the focus is on one area of competence, all resources should be included. The Groups assist both large and small enterprises to understand the future requirements and opportunities of a competency or an industry. It initiates continuing education and enhances development

possibilities for all employees working in large and small companies. It also promotes inter-company training collaboration.

Conclusions

We strongly reaffirm that adult education should from now on be seen only in a European perspective. The European projects will require the development of new trans-European networks of Tertiary education institutions, industrial companies, professional organisations, and government bodies.

5.3 Work-related education

5.3.1 The needs of industry

The competitiveness of European industry now depends on simultaneously meeting two contradictory demands: [165]

* a short term focus to enable companies to adapt quickly to the changes in the immediate business environment. Increasingly industry is being pressured to take only short-term views. The demands of the owners of industry for better and immediate returns from their investments force managers to shorten their perspectives

* a long term view to develop the strategic capabilities to compete in the future.

"If governments leave adult education to industry, as in the past, short-term considerations will predominate and preparation for the future will be inadequate. This will endanger Europe's competitive position."[166] "The development of the human resource is a function of time. There are no education programmes which yield instantaneous skills and competencies. The acquisition of experience to turn education into competence can only be acquired over a period of time. Industry will not solve its problems of competence or competitiveness by only taking a short-term view. Companies must think strategically and accept some responsibility for developing and providing adult education opportunities for their employees ."[167] New ways have to be found.

To avoid adopting short perspectives, tertiary education institutions should be much more involved in adult education. Unfortunately, European tertiary education institutions rarely

---

165 Otala L., Rethinking adult education: trends on lifelong learning, Oxford 6-7th October 1992, p. 4.
166 Otala L., European Approaches to Lifelong Learning, Genève,..., p.11

consider working adults as a target group. But, since industry needs adult education and since tertiary education institutions are best qualified to provide it, industry-tertiary education co-operative programmes will be needed to address the problem. Therefore, enterprises should collaborate with tertiary education institutions in order to set up a common curriculum.

"Companies should be encouraged to have their in-house programmes validated by appropriate awarding bodies. This will ensure that the quality of the programmes is judged against national or European standards. It will give employees completing such programmes recognition of achievement with value and credibility outside the company. By these means, more employees will be encouraged to participate in the programmes and the reputation of the company as a learning company will be enhanced."[168] What would work and study be like for individuals in a college-company or a company-college? The gains would include more convenient times and places for study, less worry about finances, clearer connections between theory and applications, contact with students having similar career objectives, chances to practice classroom skills on the job, less concern about a job after graduation, an easier time keeping up-to-date throughout a career, instructors who are current with innovations in the field, and so on.

Since many companies are becoming "learning organisations" and are beginning to master the processes of action-learning, transformation and continuous adaptation, we recommend that they should share with tertiary education institutions their experience and their know-how in the field of adult education.

5.3.2 Tertiary education institutions

Tertiary Education institutions can no longer assume that when students graduate that is the end of their education. All types of tertiary education "cannot be content with producing a "finished product" which will respond to a specific need in the present but, going even further, to provide a "enriched and recyclable primary material" capable of incorporating itself into the continuing development of the levels of competency and knowledge. Industry and individuals (in a way the clients) expect from tertiary education institutions to provide a product - the education symbolised by a diploma - with a service warranty "after-sale" which allows for "updating", "upgrading" and the "tailor-making"

---

167 Chaplin T., The Strategic Investment: the Roles and Strategies of Business Corporations, Oxford University , 6-7th October 1992, p. 3.

168 ibid., p. 5.

of abilities and of knowledge for specific ends."[169] Tertiary education institutions should co-ordinate and select various sources of education to build up a comprehensive study programme. They can also credit company courses or other non-academic study modules if they meet quality requirements

Tertiary education institutions should therefore have an important role to play in adult education, because they provide a bridge to an individual between basic education and the world of work. Rapid changes in the surrounding environment have made a major impact industry and work, and should have a corresponding effect on tertiary education institutions too, despite the protection they have for a long time received as national institutions. Trade barriers and monopolies are vanishing in other protected areas. Why should provision of educational services be protected against change ? Tertiary education institutions must face the same changes as other sectors of society and adapt to the new requirements if they want to continue their role as the main provider of knowledge and education. A systemic approach is needed to make a real change.

The employee is the "king" in adult education and he must accept certain responsibilities. The employee receives study counselling by a "adult education" counsellor of his/her company or the local tertiary education institutions. He/she has a personal competence development plan . It is a combination of his/her career plan (or his/her competence development plan) and the company's strategic plan. The employee selects a tertiary education institution which acts as "the home institution" for his/her studies, accepts his/her study plan and later grants a diploma or degree. Courses should also be transmitted through satellites, broadcasting and video-conferencing from other tertiary education institutions, as well as made available in a computer-based self-study mode. Employees can further study in the local satellite study centres of various ODL institutions.

So, tertiary education institutions should produce the required education and control the level of education in addition to arranging appropriate examinations, when needed.

We recommend that tertiary education institutions should become more open and customer-oriented to provide educational services for the continuously changing needs of working adults and business. They should develop new ways of disseminating education, such as :

---

169 Rebelo J., La dimension européenne dans les programmes et le contenu des formations de l'enseignement supérieur "Polytechnique": les attentes et les besoins des entreprises, (unpublished), March 1993, p. 7

- *extramural classes*
- *distance learning*
- *evening classes and courses during vacation periods*
- *new distribution media such as videotapes, PC programmes, CD-ROMs, and CD-I.*

Finally, we recommend that tertiary education institutions should cooperate in order to integrate their curricula and study programmes into a generally accessible network.

5.4 Adult Education and Small and Medium Enterprises

5.4.1 Difficulties for SMEs concerning adult education

Small and medium enterprises play an outstanding role in Europe: 70 % of employment and turnover in Europe is provided by companies employing fewer than 500 people. The smallest SMEs (10-19 employees) account for 54 % of the total number of enterprises employing more than 10 people: considerably more than in Japan and the US (48% and 49 % respectively).[170] These figures alone serve as a reminder of the European economy's massive dependence on SMEs for its levels of employment and turnover.

"They are an important motor for change and innovation in industrial production and trade. Their flexibility, creativity and generally high productivity allow very rapid reaction to new demands in the market. Despite the variety and heterogeneity of small and medium-sized enterprises, they can be considered as a group with common requirements for learning.

They are disadvantaged however, compared to larger enterprises, in having less opportunity to develop their expertise and less access to technical and R&D facilities, or to management information systems, which could provide alternative sources of knowledge. There is an increased need in small companies for flexible and remote training systems. SMEs need training for specific apprenticeship skills with short term effect and with no additional weight on the workload and embedded within existing information networks and resource centres."[171]

---

170 Entreprises in Europe: Second Report, DG XXIII and Eurostat, 1992

171 DELTA, Draft Report on Priorities for the Future and Recommendations for R&D Actions, Commission of the European Communities, Brussels, 1993, p. 22

5.4.2 SMEs and Open and Distance Learning institutions

Industry should set up some networking with SMEs in order to enable them to send their employees to some of the training courses organised by these companies. Yet, for various reasons, such a partnership is at times not possible. In those circumstances, SMEs should then turn to ODL institutions for their adult education programmes.

SMEs do not always find it easy to use distance learning. The reasons for the low take-up of ODL by SMEs most often given fall into three categories:[172]

* problems with providers of ODL
* problems with ODL materials
* problems relating to users.

Problems with providers of ODL

Many ODL providers are said to be doing too little to discover the needs of SMEs. It seems that they are disinclined to target particular economic sectors or training needs, and are unresponsive to feedback or are slow in responding. They continue to provide materials that are not tailored to particular requirements, or supply materials that are too expensive or only available in forms that are difficult to access. They are also bad at publishing what they are able to offer.

Problems with ODL materials

ODL materials have been found to be over-dependent on scarce, expensive or difficult-to-use technology. It is interesting to note that the use of electronic technology often seems to be most successful with SMEs where that technology is already familiar to them from some other part of their work experience.

Problems relating to users

ODL users find it difficult to specify their needs. They lack a planned approach to training or make little effort to find out what is available. Due to 'technophobia' many are unwilling to use some of the new media and perceive training as potentially threatening, or even humiliating. Some are afraid that any participation in group training might lead to the loss of "trade secrets".

Further, "SMEs do not typically have the resources to use the multimedia technologies to help them introduce their own changes and often have to fall back on conventional classroom or on-the-job learning techniques which are generally less efficient and effective. Yet large companies, in conjunction with governments and trade associations,

---

172 Wright P.W.G., op. cit., p. 19

can work together to find ways of giving SMEs access to appropriate multimedia distance learning." [173]

Conclusions

In spite of the difficulties that still remain, "ODL offers the opportunity to customise training more precisely to the needs of individual SMEs. Delivering such training "on the job", together with access to other support services facilitates work-based learning directly related to specific business problems and opportunities. Research and development of telematic environments and infrastructures for training in SMEs should be a core activity of the next decade and should take into account existing regional, sectoral and national infrastructures."[174] We support every step taken into that direction.

5.4.3 The SME network

In order to stimulate the articulation of specific demand for distance education by SMEs the organisation or stimulation of regional networks encompassing local small- and medium-sized industry and educational institutions is likely to be successful. Networks essentially establish relations between SMEs operating on the same level on the one hand and between SMEs and the supplier of educational services on the other.

Through networking SME managers become aware of gaps in knowledge and skills within their firms. "The network stimulates the confrontation with colleagues and with suppliers of educational services. In regional study- and demonstration-centres the confrontation of demand and supply of knowledge can lead to the formulation of a more concrete and tailor made educational offer. This is a social process, breaking the manager's isolated position. This isolated position is a serious barrier to awareness and knowledge in this respect. In this way the stimulation of network-formation in a regional context can lead to an amelioration of the comparative position of SMEs by making them more knowledge intensive."[175] Further, these networks should be able to help the setting up of ODL programmes, answering the needs of SMEs.

We recommend that SMEs should establish networks by profession within a region in order to provide a common training to their employees, for example by employing a study counsellor.

---

173 Sherwood-Roberts P., Vervest P., op. cit., , p. 66

174 Information and Telecommunication Technologies..., op. cit., p. 25

175 Boon M.J., Distance Education and Qualifications: Small and Medium-Sized Enterprises, Brussels, Commission of the European Communities, 1991, pp. 3-4

GENERAL CONCLUSIONS

"Ah, but a man's reach should exceed his grasp,
Or what's a heaven for?"
(Robert Browning)

The aim of this report is to raise a cry of alarm about the state of education in Europe and to make some practical proposals about how all the many parties involved could work together to start putting things right.

Despite the valiant efforts of so many people who work in education, despite the endless discussions of every aspect of the subject and the innumerable piecemeal reforms that have been tried in every country in Europe, the most evident result has been to create more confusion than clarity of purpose.

The profound conviction expressed in this report is that the problem must be seen as a whole. Piecemeal changes cannot possible help and may even make things worse. This report fully acknowledges the great diversity and decentralisation of European education, and indeed wholeheartedly welcomes this diversity as one of Europe's greatest assets and must be treasured at all costs. We make no proposals to centralise or impose any standard answer.

But we do appeal for a coherent vision of how much more education could and should be doing for every individual person in Europe, as well as for European society and economic activity perceived as a whole. We would urge upon all the key actors - governments and educational institutions, teachers and students, families and businesses - to participate in this common vision and then all to make their own efforts, in their own very different ways, to move in this common direction.

The essential elements of the coherent vision have been clearly set out in this report.

* Education should be a **lifelong process**. Everyone should keep on learning through life, and every stage of the educational process should be seen and planned and managed as part of this coherent whole.

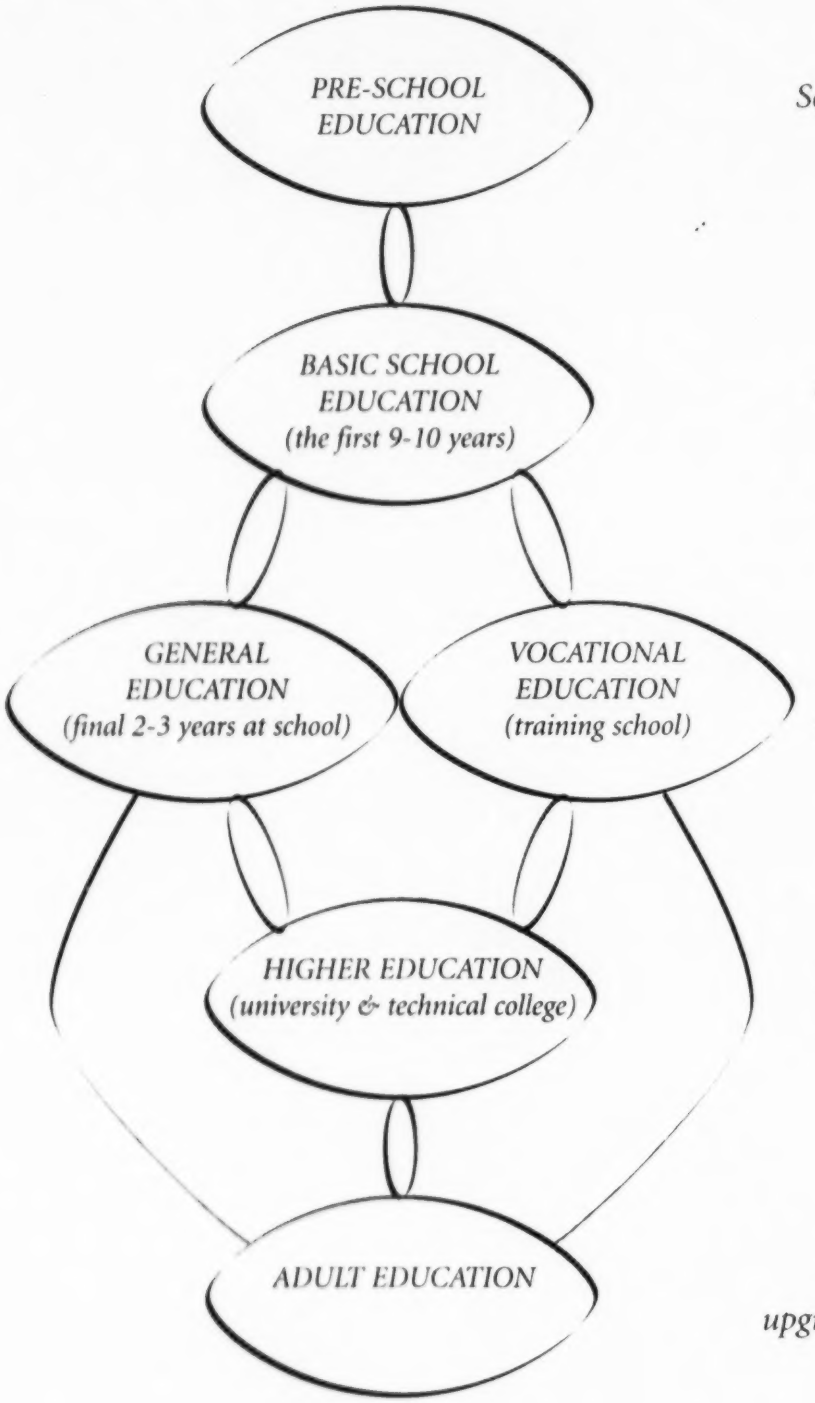
* **Education is for everybody**, and we see no contradiction between the triple goals: that each individual should develop as fully as possible to the limits of his own capacities and aspirations, that each person should contribute fully to society and should participate in economic activity. There must be no marginalisation in our future society, no barrier between the educational haves and have-nots.

* Education should be directed towards the **rounded individual** and every one should be fully engaged in what we call the **three cultures**: of mathematics, science and technology, of humanities and art and languages, of economic and social questions. Nobody should be illiterate in any of these fields.

* Education must develop far beyond its present performance and yet the human and financial resources available will always be strictly limited. This puts a great premium on **better management**, and the key to this is **the use of new information and communications technology** which can put into every student's hands the ability to learn for themselves. The teacher of the future must develop from being a production worker, teaching so many facts to so many pupils for so many hours a day, to being a planner, a coach and supervisor, and (not least) a critic of the learning process itself.

* Nobody can force this process of change. Everybody can help to facilitate and encourage and so make it happen. **Spontaneity, innovation, experiment, diversity and decentralisation** are the key-words, and if the **vision** is clear then action on these lines will produce the results that we need. The universities represented in CRE and the industrial companies in the ERT will make their own contribution, both to spreading this message across Europe and to acting on it themselves.

Links		Stages in Learning
Link I	PRE-SCHOOL EDUCATION	Socialisation
Link II	BASIC SCHOOL EDUCATION (the first 9-10 years)	Citizenship
Link III	GENERAL EDUCATION (final 2-3 years at school) / VOCATIONAL EDUCATION (training school)	Towards life & the first job
Link IV	HIGHER EDUCATION (university & technical college)	Enhancing knowledge
Link V	ADULT EDUCATION	Updating/ upgrading skills



The Education Chain

Association of European Universities
10, rue du Conseil-Général
CH-1211 Genève 4
Tel: 41 22/329 26 44
Fax: 41 22/329 28 21

European Round Table
avenue Henri Jaspar 113
B-1060 Brussels
Tel: 32 2/534 31 00
Fax: 32 2/534 73 48